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A
L E C T U R E
INTRODUCTORY TO THE
THEORY and PRACTICE
O F
M I D W I F E R Y

A
L E C T U R E
INTRODUCTORY TO THE
T H E O R Y and P R A C T I C E
O F
M I D W I F E R Y:

Including the History of that Science; with a View of its several Branches,
and the proper Means of attaining a perfect Knowledge of the Whole.
Also animadversions on the Qualification and Deportment of an
ACCOUCHEUR:

Publicly delivered at his THEATRE, in Craven-Street, London.

B Y

J O H N L E A K E, M. D.

Member of the Royal College of Physicians,
And Physician to the WESTMINSTER LYING-IN HOSPITAL.



Parce precor gravidis, facilis Lucina, puellis,
Maturumque utero molliter aufer onus!

OVID.

FOURTH EDITION corrected, with ADDITIONS.

Printed for R. BALDWIN, in *Pater-noster Row*.

L O N D O N.

M,DCC,LXXXII.

Monſieur Monſieur *John Leake*, docteur en medecine, membre du Collège Royal des Medecins de Londres, &c.

Maximâ cum voluptate et non ſine fructu, Vir illuſtriſſime et ornatiffime, tuum legi et relegi librum, cui titulus eſt: *Practical Observations on the Child-bed Fever, printed London 1772*. In illo enim reperi animadverſiones curioſas et plane novas de affectibus omenti, diſquiſitiones nitidas et ſagaces de curatione febris puerperium inſequentis, dubitationes quas dictarunt prudentia et moderatio contra ſyſtema noſtri Celeberrimi *Leuret*, cogitationes accuratas de hæmorrhagiis ante et poſt partum. Quid magis? in toto iudicium et ſcientia veri boni que medici reſulget, his itaque perpennis, ſeu ægrorum ſalutem, ſeu artis medicæ incrementum proſpiciam, tuum librum cunctis gratiſſimum duxi; qua propter ut melius innotelcat, hunc in idioma gallicum converto, jam ferme abſoluta eſt interpretatio; et paucos intra menſes, ſi tibi libet, prelo publico poterit in Franciâ committi.

Mihi familiaris et colendus amicus habet nunc ſub prelo tractatum idiomate Gallico ſcriptum de hæmorrhagiis uterinis. Plurimis abhinc menſibus auctori communicaveram verſionem tuæ ſectionis Væ. *Of the nature and cauſe of uterine hæmorrhages, and their treatment, &c.* in hoc novo tractatu mei amici, multa ſunt de te excerpta cum laude tui ingenii et tui operis.

Auctor novi tractatus, poſt expoſitionem variarum methodorum contra hæmorrhagias uteri, nil efficacius invenit quam obturatio vaginæ cum Linteolis vel ſiccis, vel imbutis aceto, ſed profunde immiſſis. Hæc methodus olim vetuſtiſſimis nota, in oblivione quodam modo jacebat; ſed nunc reſurgit longâ et felici experienciâ ſtabilita; et enim introductio linteorum in vaginâ, dum ſanguinis fluxum, juvat quoque formationem coaguli; interim uterus novas acquirit vires; ſeſe conglomerat et conſtringit, contractionibusque propellet coagulatum ſanguinem et linteola immiſſa; ſed ut obturamentum vaginæ ſit ſemper ſauſtum, plurimæ ſunt adhibendæ cautiones: ſcilicet, mollis compreſſio uteri cum manu, applicatio ſupra pubem linteorum aquâ frigidâ, aut forſan melius aceto madidorum, uſus aeris frigidi, et, ut uno dicam verbo, quidquid poteſt juvare uteri contractiones et vaſorum ſanguinem fundentium clauſuram.

Celeberrimus *Hoffman*, *Cornelius Trioen*, multique alii jam indicarant obturamentum vaginæ contra hæmorrhagias uteri; hæc methodus tibi, Vir clariſſime non erat ignota; attamen in praxi vix erat explorata. In curriculo menſis proximi, ut opinor, novus tractatus mei amici evulgabitur; et in illo videre poteris ferme omnia quæ ſcripſiſti *de opio, medicamentis aſtrigentibus, venæ ſectione, &c.*

Vale, Vir clariſſime; et quanquam ſi extraneus, et nullo modo tibi notus, non dedigneris, quæſo, meam ſinceram admirationem.

FRANCISCUS CHAUSSIER,

Datum Divione die 21, 7bris. 1775.

Chirurgiæ magiſter in urbe Divionenſi apud Burgundos, acad. reg. chirurgiæ Pariſienſis correfpondens, &c.

P. S. Si valis mihi reſponſum dare, ſubjungo inſcriptionem epiſtolæ in idiomate gallico.

MONSIEUR,

JE vous prie d'accepter un exemplaire de l'ouvrage que je publie en faveur de l'operation nouvelle de la ſection de la Simphiſe que j'ai determiné, et à la quelle j'ai coopéré. J'y joins le recit de la Faculté de Medecine de Paris, et un théſe qui

d'être

d'être soutenue dans nos Ecoles, la quelle adopte mes principes et offre six exemples de succès. J'enseigne les accouchemens, &c. Je suis le premier medecin de notre faculté qui se soit aussi décidément livré à cette partie de la medecine qui est en France aux mains des chirurgiens. Je connois vos travaux sur les fievres à la suite des couches ; j'établis vos principes et je me plais à vanter vos talens. J'ai donné un Histoire des principaux Accoucheurs, Smellie et vous, Monsieur, y occupé un rang distingué. Recevez mon Opusculé comme un hommage que je me plais à rendre à votre célébrité. J'ai mandé à mon libraire de me faire parvenir tous vos ouvrages, je compte en faire bon usage pour un traité d'Accouchemens, que je vais publier et dans le quel j'aurai un grand nombre de fois occasion de publier avec quels sentimens d'estime respectueuse j'ai l'honneur d'être,

MONSIEUR,

Votre très humble et très obeissant serviteur,

ALPHONSE LE ROY,

Docteur Regent de la Faculté de Medecine de Paris, Professeur
d'Accouchemens et de Maladies des Femmes.

Mai le 15, 1778.

M. LEAKE, Professeur d'Accouchemens.

TRANSLATION.

S I R,

I INTREAT your acceptance of my publication on the *new operation* of cutting the symphysis of the *pubes*, which I have successfully performed. I likewise inclose a report of the Medical Faculty at *Paris*, and a Thesis, which has lately been discussed in our College, wherein my principles are adopted ; together with *six examples* of the success of this operation. I give lectures in midwifery, &c. and am the first in our faculty who has so devoted himself to this branch of physic, which in France belongs to surgery. I am acquainted with your *Practical Observations, &c. on the Child-bed Fever*. I adopt your principles, and take Pleasure in praising your Talents. I have given a History of the principal *Accoucheurs*, wherein *Smellie* and you, Sir, hold a distinguished rank. I present you with a sketch of my work, as a tribute which I owe to your eminent reputation, and have given orders to my bookseller, to send me all your works, of which I intend to make a proper use towards a Treatise I am going to publish on Midwifery, wherein I shall have frequent occasion to testify the respectful esteem with which,

S I R,

I have the honour to be,

Your most humble,

And most obedient Servant,

ALPHONSE LE ROY, M.D. &c.

May 15, 1778.

M. LEAKE, Professor of Midwifery, &c.

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Doctor Regent of the Faculty of Physic in Paris, and Professor of Midwifery, &c.

Translated from the FRENCH,

By LEWIS POIGNAUD,
Of the Corporation of Surgeons, LONDON, and Surgeon to the WESTMINSTER
LYING IN HOSPITAL.

(1)

LECTURE

INTRODUCTORY TO THE

THEORY and PRACTICE

OF

MIDWIFERY.

THE subject of this LECTURE relates to a branch of medical science, in which all men are interested, particularly those who exercise the *obstetric art*, tending to the preservation of that amiable part of the creation, woman, from whom we derive our being, and greatest happiness.

Knowledge of the principles of a science, before we begin the study of it, is both satisfactory and necessary; what, therefore, gentlemen, I have to lay before you, on the present occasion, may be considered as introductory to a COURSE of LECTURES on the Theory and Practice of Midwifery, and Diseases of Women.

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The earliest accounts we are able to obtain, inform us, that Midwifery, like other sciences, originated from necessity; and therefore, is so extremely ancient, that it seems to have sprung up with the first race of mankind; for notwithstanding the human body, in its original state, came perfectly formed from the hand of the Creator, with all its parts wonderfully adapted to perform their several functions; and although its strength and vigor was then less impaired by intemperance or disease; yet, Nature in the production of our species, not being always able to support and maintain her own laws; the difficulties to women in travail were nearly the same in the first ages as at present, and consequently, stood in need of the like assistance.

That which principally ennobles any science, is the dignity of its object, and the public utility arising from it; so that if we may rate the value of Midwifery by the advantage it procures to the human race, it will be found superior to all others; inasmuch as most of them are only subservient to the conveniencies of life, but on the due exercise of this art, immediately depends the preservation of life itself, even in a double capacity. Hence the poetical invocation of the ancients:

*“Phœbe fave; laus magna tibi tribuetur, in uno
“Corpore servato, restituisse duos.”* TIBULL.

Midwifery indeed, has often been degraded by the ignorance and unworthiness of many who practised it; and some of the medical profession are to be found, who, with more vanity than solid sense, think it below their affected dignity to exercise a manual art, or save the life of their fellow creature, otherwise, than by directing medicines, or feeling the pulse; --- means often vague and ineffectual, without the interposition and assistance of nature herself. But it ought to be remembered, that among the ancients, the practice of physic and surgery were united, and that learned men in all ages have not only studied Midwifery themselves, but recommended it to the attention of others, as a *curious branch of natural philosophy*, which will afford the highest entertainment to contemplative minds, and as a thing of the utmost importance to the community. It is not, indeed, necessary that a physician should practise Midwifery; but if he is unacquainted with that science, he is less entitled to the name of physician, which implies a general and extensive knowledge of every branch in the healing art.

Among the ancients, that venerable parent of physic, *Hippocrates*, not less illustrious for social virtue than his profound knowledge of philosophy, wrote several books professedly on Midwifery, and the diseases incident to women; *Aristotle*, likewise, who was tutor to *Alexander the Great*,
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and by his order amply supplied with whatever the known world could afford relative to natural history and the generation of animals, did not disdain to write on the same subject ; as did also *Avicenna*, who was a physician and an Arabian Prince.

Of the moderns, the celebrated *Harvey*, physician to king *Charles* the first, who discovered the circulation of the blood, discourses largely on generation and child-birth ; and *Ruyfch*, that laborious investigator and promoter of anatomical knowledge, not only practised Midwifery, but was appointed Professor of that art, by the states of Holland. The learned *Astruc*, royal Professor of physic at Paris, and physician to the French king, gave public Lectures on Midwifery ; and also *Albinus*, an illustrious Professor of anatomy and surgery in the university of Leiden.

Daily experience affords ample testimony of the great utility of Midwifery, whether it regards the immediate preservation of individuals in pregnant women, or extends its influence to the good of society in general. In preternatural cases, or profuse uterine hæmorrhages, where nothing but speedy delivery could save the patient's life ; the timely and judicious assistance of an *Accoucheur* snatches her, as it were, from the grave, and often preserves her infant also ; he restores to the despairing husband
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the tender partner of his bosom, and gives consolation to all who are united to her by the ties of blood and natural affection.

The art of Midwifery likewise principally constitutes and illustrates the *Medicina forensis*, or that part of medicine which contributing to the public administration of justice, in what relates to virginity, pregnancy, and the natural period of uterine gestation; as well as to form a judgment whether unlawful means had been used to occasion abortion. It likewise directs us to the properest means of discovering whether an Infant was still-born or destroyed after birth. Besides those cases, in which the decision of an *Accoucheur* has no inconsiderable share, there are other important points which could not be satisfactorily cleared up, or properly determined without his interposition; and therefore, the verdict of Juries, respecting the *legitimacy of children, indictments for rapes, or actions to obtain divorce*, are chiefly guided by his report.

We are told, when women under sentence of death plead their belly, execution is ordered to be delayed; and that this matter is generally decided by a jury of matrons; but, did not the law of the land expressly thus command it, those judges,
who

who would admit of such juries, ought to be deemed matrons as well as they.

To err on the charitable side, is certainly excusable; but those who have not put off all sense of feeling and humanity, must hear with horror and regret, that many children have, from thence, fallen victims to punishment, who were not sharers in guilt, and have been entombed alive within their mothers' womb. *Dionis* mentions a case of this kind, where a midwife of the Chatelet at *Paris* having examined a servant under sentence of death, and who pleaded her belly, positively declared she was not pregnant; in consequence of which she was immediately executed; but when the body was publicly opened, a child was found in her womb.

How often have young women brought forth children, who a few hours before had been declared pure virgins? Indeed, men of knowledge and skill in their profession are not always free from error, and that is always most excusable in those who have sufficient resolution and candor to confess it, for the benefit of others; but if such as have judgment are sometimes mistaken, surely it ought to be a lesson of humility and caution to those who either have very little or none at all. In a word, if it is of consequence to prove the *legitimacy of children*, and to prevent a spurious issue from inheriting the property

property of the lawful heir ; if it is of importance to *acquit the innocent and punish the guilty*, in the most horrid and unnatural of all crimes, that of child-murder ; the public utility, and private advantage of that science, on which such determinations chiefly depend, must then become self-evident.

The Creator's wisdom is not more conspicuous in the great, and original work of creation itself, than the means by which succeeding generations spring up and people the world ; and if the inanimate bodies of shells, fossils, and other concretes, or the more beautiful and organized parts of matter in the vegetable system, so often engage the curious ; surely, the *Obstetric Art* would afford them entertainment much more rational and interesting. In degree, it comprehends the natural history and physiology of the human body, and gives us an idea of its original structure. It likewise tends to illustrate and explain the mental faculties resulting from it ; the organs of sense being the first inlets to all our perceptions, which vary in perfection, according to the perfect modification of those parts, and the due performance of their several functions. It would, indeed, be impossible to discover, by the nicest anatomical researches, that exquisite peculiarity of structure in the brain, which constitutes the difference between the idiot and man of sound intellect ; yet, as every effect implies an existing cause, such an identical difference may be reasonably inferred ; for it

would be unphilosophical to suppose any essential difference in the nature of the intellect or soul itself.

No science leads us so immediately to a survey of our own origin as this ; it presents to our view the rudiments of the fœtus, and shews how they gradually unfold themselves in magnitude and figure, from conception to the time of birth : Thus we may observe,

“ *How the dim speck of entity began,
‘T’ extend its recent form and stretch to man.*”

GARTH.

Here it may also be remarked, how the causes of things remain inactive, till they are excited into motion by other subordinate causes ; for the *primordia* of the human body, like the stamina of plants in their seed, lie dormant and concealed in miniature, in the female ovum, till they are supplied with a vital principle, and rendered prolific by the subtile *aura genitalis* of the male. The philosopher and physiologist may then trace with wonder, the revolutions of matter in the human embryo, divesting itself by degrees of its inert qualities, till by a new modification of parts, it becomes an organized body, and *vegetates into life* : 'Tis now supplied with pipes and strainers fit to convey its juices, but having yet
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only circulation without sensation, it resembles the growth of vegetables, and, like a parasite plant, germinates and strikes root in the womb.

The solids of a fœtus, even the bones themselves, were once in a *fluid state*, and void of all sensation; being derived from the common elements of matter taken into the body for nourishment; and it appears highly probable, at least to me, that the extraordinary property residing in matter, called *Irritability*, is the *first instrument which Nature employs towards the production of animal life*. 'Tis owing to this, that the *sensitive plant* shrinks from the touch, and the flesh of slaughtered animals palpitates and trembles after death.

Hence then, the embryo may be considered as an organized body which advances to maturity by slow and insensible degrees: At first it admits the circulation of fluids through its delicate vascular system, and soon as it becomes *Irritable*; the *punctum sanguineum saliens*, the *primum vivens* and *ultimum moriens*, so beautifully described by the immortal *Harvey*, puts the animal machine in motion. In process of time, the diminutive being is endowed with life, motion and sensation; and at last, when arrived at its utmost] period of perfection in the adult, becomes possessed of those sublime mental faculties which do honor to human nature. Such once

were *Newton* and *Descartes*, and of such humble materials may other *Alexander's* and *Cæsar's* be made, under the forming hand of the Almighty Architect.

Thus by a real transubstantiation, we begin to “*exist on many thousand grains that issue out of dust* ;” but how and when the mystical union of intellect with matter is effected, must ever remain a secret to us, and can only be known to the Divine Author of our being.

'Tis presumed that the existence of animal bodies cannot commence without the agency of an immaterial principle ; but it should be observed, that the concurrence of material physical causes are also necessary ; for the vital principle in the *ova* of birds would lie dormant for ever, was it not excited into motion by the application and energy of heat*. It may also be remarked, that the faculties of the mind increase as the corporeal organs advance in perfection from infancy to manhood, and then gradually decline as the body tends to decay.

During this tedious progress of animal life, from the first dawning of a living principle to the last extreme of age ;
physiologists

* *Natura in animali omnino animal est. Ipsa fabricat Calces, Dentes, Cornua, ad vitam tuendam ; itaque ipsa utitur, & scit quo sit utendum modo, sine objecto aut Phantasia ulla.*

J. C. Scalig. Exer. 307. Sect. 29.

physiologists have supposed there must have been an entire transmutation or total change of body, so as to leave no idea of *personal Identity*; and therefore the celebrated Mr. *Lock* places it in *Consciousness* only. But altho' the adventitious substance of the body, derived from aliment for its nourishment, should be many times changed, its *original stamina* must remain identically the same.

The ways of Providence are past finding out; yet these very perplexities with which we meet in the pursuit of knowledge may afford some advantage. They will abate the extravagance of enthusiasm, and correct that vanity and self-sufficiency so natural to the mind of man. They will teach him diffidence and humility, by shewing him many things of which he is either doubtful or totally ignorant.

The learned Dr. *Bentley*, in his confutation of atheism, has clearly shewn, that the force of gravity, however it may influence the larger masses of matter, is utterly insufficient to account for the formation of animal bodies. The science under consideration has not been less eminently serviceable in the cause of religion, by demonstrating the wisdom of the Creator in the structure and use of their several organical parts, as well as in affording experimental facts which *refute the doctrine of equivocal Generation*, that great barrier and

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subterfuge

subterfuge of the atheistical sect of philosophers, who concluded, according to their principles, that if *Crocodiles* and other animals were produced by putrefaction, in the banks of the Nile; that men also, like so many animal plants, might originally spring up by chance from the prolific mud of their mother earth, to the total exclusion of divine agency.

This pernicious notion which prevailed for many centuries, was at last opposed by *Redi*, a celebrated naturalist of Florence, who by several curious experiments, incontestably proved, that the concurrence of both sexes is essentially necessary towards the production of the smallest as well as largest animals; and that those putrid substances, supposed to have generated insects, only afford them a proper *nidus* or hatching-place, but never produce them by spontaneous formation.

It must, indeed, be confessed that some particular animals are produced in a manner very singular and anomalous. A *Polypus* cut into several parts will generate so many perfect and distinct *Polypi*. How strangely different then may be the effect of the same cause, in animals of different species? since the division which would destroy a human body, tends to generate and multiply that of a *Polypus*.

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This extraordinary creature, I think, may be considered as an intermediate link connecting the two different orders of animal and vegetable bodies; for the sensitive and generative faculty of the first, may be perceived to descend gradually in the scale of animal beings, till it dwindles into the inanimate growth of plants. As nature insensibly drops the animal process, she begins to play the mimic, and transgress her own laws: Thus *snails* and *earth-worms*, according to *Swammerdam*, are all of the hermaphrodite kind, and whilst they impregnate are reciprocally impregnated; and that uncommon reptile the *Surinam toad* does not produce its young from the interior parts of its body, like other animals, but from certain cups or sockets placed upon its back.

Lesser in his *Testaceo-theologia* asserts, that the *balani marini*, *rock muscles* and *oysters* are not only hermaphrodites, but such as without any manner of concurrence with each other, have within themselves a power to generate and bring forth their kind *. An impregnated female *Aphis*, or *plant-louse* can communicate to her offspring the extraordinary power of producing others in succession even to the fifth progeny, without any fresh impregnation; and what is equally astonishing, the same species of *Aphis*, which in summer was

viviparous,

* No *Hermaphrodites*, among the insect tribe, have yet been discovered.

viviparous, becomes *oviparous* in autumn. It is also wonderful, that the *Coccus* and *Oniscus* no sooner bring forth their young, than they are devoured by them. And lastly, if we descend to vegetables, however strange it may appear, certain it is the *farina* or seed of the male flower impregnates that of the female, otherwise no fruit would be produced; for *Linnaeus* observes the savin tree was fruitful in the Upsal garden, where the male plant grew near it, but in the Clifford garden, where the male was wanting, there was no fruit at all.

The rudiments of the *fœtus* having already been considered, it is necessary to remark, that the œconomy of Nature, in perfecting what she had begun, is no less extraordinary; whether it regards the vital functions of the womb in nourishing the child, or the amazing expulsive force by which it is brought forth. After puberty, the female organs are so disposed as to prepare a larger quantity of blood than is necessary for the nourishment and immediate supply of the woman's body; and therefore, when she is not with child, it is periodically carried off once a month, lest it should overfil the vessels and incommode her constitution; but as soon as she becomes pregnant, it is then sent to the womb for the nourishment of the *fœtus*; consequently, during nine months' gestation, the *menfes* are naturally wanting. When the infant arrives at

its utmost bulk, the uterus can then no longer contain it without danger of bursting; the violent distention of its fibres now creates pain, which puts the whole uterine system into a state of re-action, and from thence the birth is effected; so that what are called labor-pains are only the effect of that *nifus in contractionem*, or powerful endeavour of the womb to expel its contents.

From the vascular contexture and peculiar fabric of the uterus, its cavity, which in the unimpregnated state was not more capacious than that of a large filbert, at last becomes sufficient to contain a child weighing seven or eight pounds; and what is still more extraordinary, it does not, like a mass of wax or other ductile substance, become thinner in proportion as it is extended, but uniformly *preserves its natural thickness from conception to the time of birth*; had it been otherwise, Nature would have run counter to her own designs, and instead of bringing the foetus to maturity, the womb must have burst, and the purposes of conception would thereby have been defeated.

After the child is born, the circulation changes, and less blood being wanted at the uterus, a certain quantity of chyle, which before had nourished the foetus, is now sent to the breasts, to supply the new-born infant with that balsamic

fluid called *Milk*. Hence it may be observed, how admirably this organ is adapted to answer the important purposes of generation ; namely, to allow of vast extension without bursting ; secondly, to contract with amazing force in labor, for the exclusion of the child ; and lastly, by means of the same power, gradually to return to its former state.

Immediately after the infant's birth, its lungs which had remained inactive during nine months' gestation, are blown up with air, and it is scarcely to be imagined, that the cause of what so naturally then happens to every living animal, should in itself be so obscure, that the ablest Physiologists have attempted to account for it in vain ; so that it still remains a question, in what manner the act of *Respiration* commences in in animals newly brought forth ?

Borelli and *Boerhaave* ascribe the beginning of respiration to an increased motion of all its muscles in the time of labor, and among the rest, those of the intercostals and diaphragm, which are the principal instruments of breathing. But that incomparable philosopher Mr. *Boyle*, as well as *Vesalius*, has experimentally shewn, that puppies cut out of the womb begin to breathe, when exposed to air, in the same manner as if they had been naturally brought forth. Besides, we shall shew in the following Lectures, that the fœtus does
I not

not usually struggle as generally thought, but is a mere passive body, which advances in the birth as it is acted upon by the vital impulse of the uterus, and in itself utterly destitute of all power to facilitate its own exit.

Pitcairn supposes, that air, by its gravity, rushes into the infants lungs as into a vacuum; but if this was true, it would also find entrance into the lungs of a still-born child; and that machine which we call a pair of bellows, would be blown up by the same atmospherical pressure, which we know is not the case.

Baron *Haller* supposes, that respiration commences from the child's endeavour to cry, in consequence of the pain it suffers during labor; but this is by no means an adequate reason, and very unlike what has usually been advanced by that learned and ingenious author; for, notwithstanding all living animals naturally begin to breathe as soon as brought forth, they do not all make a noise similar to that of crying in the human species; and farther, the act of crying being subsequent to breathing, the first is manifestly owing to the last; for it would be palpably absurd to say, that a child could either cry, or even endeavour to do so, without the previous power of breathing.

The late celebrated Dr. *Whytt* will not allow, that respiration arises from causes merely mechanical, and therefore recurs to a sentient principle, which puts certain muscles in motion at particular periods; hence the infant is born with a natural propensity or appetite for breathing, similar to want of meat or drink in the adult. He supposes, that in consequence of its struggles in the birth, a larger quantity of blood will be sent to the lungs, which stimulates them into a respiratory motion; but this, like every other reason hitherto advanced, is insufficient to solve the question at first proposed; since it may easily be proved, that the cause of breathing, whatever it may be, is not originally impressed on the lungs themselves, but on the organs of respiration. The air by its gravity cannot press into a pair of bellows, till their sides are pulled asunder, neither can the lungs of a new-born infant be inflated and begin to play, till they are freed from all pressure by the action of the intercostal muscles and diaphragm, which raises the sternum and enlarges the cavity of the breast.

To proceed; when we come to examine parts peculiar to the foetus, there the immediate finger and *fiat* of the Creator still discovers itself in a more wonderful and conspicuous manner; for, the *canalis arteriosus* and *foramen ovale* are manifestly designed as *diverticula* to carry off blood from the heart, and hinder it from rushing upon the impervious vessels of the lungs,

lungs, which being yet uninflated and compressed, could not allow it to pass through them; and had it not been for this curious and cunning device of Nature, since the whole mass could not circulate through the pulmonary artery, as in the adult, it would necessarily have regurgitated on the heart and produced a mortal suffocation.

When the child has inspired air, the *devious passages* already remarked, being useless, are shut up and obliterated, except in *amphibious animals*, where it is necessary they should still remain open; for, whilst they dive under water, their lungs must cease to play, and the blood cannot then pass through them; so that such creatures, though deprived of air, will still sustain life, and in the same manner as they did in utero. This probably may be the reason, why young animals survive longer in the exhausted receiver of the air-pump, than old ones of the same species; and also why drowned persons, and those executed, have sometimes been surprizingly restored to life. Hence also the whimsical attempt to render puppies or other young animals *amphibious*, by alternately putting their heads under water and into the common air; for, in the first case, it is presumed the *canalis arteriosus* remains open to the course of the blood; and in the last, that it will only circulate through the lungs.

The great Dr. *Harvey*, in a latin epistle to *Riolanus*, proposed the two following questions :

“ *Cur fœtus in utero, non respirans aërem usque ad mensem decimum, ob defectum respirationis non suffocatur ?* ”

“ *Quare in utero existens, vel adhuc intra secundinas, nondum exitum adeptus, vitam sine respiratione retinere poterit, quam primum vero aëri semel expositus, nisi respiraverit, vitam retinere non possit ?* ”

Op. Harv. a colleg. med. Lond. edit. p. 132.

Both the above questions will be answered when we come to the Lecture on the Fœtus ; it is here only necessary to remark, that as animals *in utero* do not exercise the faculty of breathing ; respiration, under certain circumstances, is not essential to life. Indeed, might we trust our reason or attend to our own feelings, it would be as difficult to conceive that any animal could live without respiration, as without circulation itself ; which shews that the great and wise Author of nature can easily find expedients to accomplish his designs, when human invention is utterly at a loss and put to confusion.

Several of the preceding phænomena may be rationally accounted for, as we shall endeavour to shew in the *subsequent*

quent Lectures; whilst others are involved in obscurity and too remote for human comprehension. It would be difficult, for instance, to know, how the strong, elastic uterine fibres, are overcome by the gradual influx of juices into the tender stamina of the Embryo, after conception; and how the same cause exerts itself, in the last months of pregnancy, with such amazing power, as not only to become superior to the womb's action, but likewise the additional pressure of the abdominal parietes in which it is contained.

Here it might also be asked, what determines the growth of animals and puts a *ne plus ultra* to their farther enlargement, or, why they do not continue to grow during life? Why are some plants and animals only the short-lived beings of a day, whilst others subsist more than an hundred years*? and why are the sensations in some animals so exquisitely acute as almost to occasion pain, but in others so dull and torpid as scarcely to produce feeling equal to that of the unconscious *sensitive plant*?

The utility and extent of Midwifery may still be farther shewn, by applying it to the knowledge of particular diseases.

* The *Creeping Ceres* blossoms at night and dies in the morning, and the *Ephemeris Fly*, although two or three years in hatching under water, when brought forth, scarcely survives a single day. The *Forest Oak* is said to grow one hundred Years, and the *Stag* is supposed to be an animal of extraordinary longevity.

eases. If the *pathology* of those maladies derived from the parent are ever to be more perfectly understood, it might be expected from the assistance of this art. Those things premised, it may be proper to enquire, whether long protracted *chronic diseases* do not at last become *hereditary*; and also, whether the placentary vessels are adapted, by their peculiar structure, to absorb from the parent, the matter or efficient cause of one disease, and to exclude that of another; as may be observed, by analogy, in the nutrition of plants, which, by an inherent, or elective power, imbibe juices of very different qualities from the same soil; and what is still more remarkable, the flower, fruit and bark of the same shrub, all vary in smell, strength and taste, according as they are influenced by the vessels of those particular parts.

In some of those diseases manifestly hereditary, viz. *scrophula*, *gout*, and *lues venerea*; might not the *materies morbi* be subdued and totally extinguished in the human Embryo, by enjoining the mother a medicated regimen during the time of pregnancy? From some late observations, I have reason to believe it may be effected; and this circumstance deserves the greater attention, as the morbid matter in a more advanced age, might be so intimately mixed and disseminated through the system, as never to be exterminated and totally taken
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away, though at particular periods of life, it may either lie dormant or appear with less violence.

*"The young disease that must subdue at length,
"Grows with our growth, and strengthens with our strength."*

POPE.

Such therefore is the miserable state of man, that he not only inherits some diseases before he sees light, or enjoys the privilege of breathing; but is afterwards subject to many more, which alternately afflict him from the cradle to the grave.

The application of variolous matter to pregnant women, who have had the small pox, would determine whether the virus was of such a nature as to be absorbed by the vessels of the Fœtus; and if so, whether this new mode of practice would not afterwards effectually secure the infant from the influence of that destructive disease. Should such a method be adopted, it would be most proper in the last months of gestation, where the vestiges of the disease might be seen on the skin of the new-born infant; or should no such marks appear, the event of the experiment might be certainly known, by inoculating the child and attending to the subsequent effects. A case mentioned in the Philosophical Transactions, where the variolous

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matter applied to a child which had previously received the infection in utero, was not sufficient to re-produce the disease, suggested to me the propriety of this practice; as well as a short but ingenious essay on the subject by a gentleman of Glasgow, which accidentally fell into my hands. Hence also it might be necessary to enquire, whether those adults who are said totally to escape the small pox, have not been thus previously infected with it in the time of uterine gestation.

It does not, I think, appear that this experiment would be attended with danger; for the mother's habit would not be affected by it; and it has repeatedly been observed, that infants escape the danger of this disease in proportion to their tender age; which probably might have introduced the practice of inoculating them at the breast, when only three weeks or a month old: However, gentlemen, I desire it may be remembered, that this hint is rather proposed for the consideration of the curious, than as a circumstance as yet sufficiently supported by practical facts.

Strange things have been imputed to the *Mother's Imagination* in marking or mutilating her child in the womb. This extraordinary opinion is ancient as the book of Genesis, and has even been transferred from the human species to the brute creation; for, we are told in the thirtieth chapter, “ streaked rods were placed
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before the breeding cattle, to make the young ones speckled." However unphilosophical and absurd such ideas may appear, they have been adopted by many, even in the present enlightened age, who too readily take things for granted on tradition and hearsay, instead of trusting to the testimony of their senses. Thus vulgar errors, like the distempered offspring of which we are speaking, have been propagated and delivered down from one generation to another. The ignorant and superstitious, in particular, refuse to be convinced, and are offended with such as disturb their extravagant belief, but are wonderfully entertained by those who feed their sickly fancies, with strange examples of marks, monsters, and mutilated forms, to whom they listen with as much avidity, as *Shakespeare's blacksmith* "with open mouth swallowing a tailor's news."

It is much to be regretted that the generality of women are thus inclined to an opinion so unfavorable for themselves; which not only tends to disturb their repose and fill their minds with horror and dreadful apprehensions, but is also contrary to experience, sound reason, and the state of the animal œconomy. To suppose that nature, in the production of the Fœtus, should thus transgress her own laws, and be put out of her due and regular course by trifling accidental causes, is not only cruelty and disaffection to themselves, but an affront to the wisdom and goodness of the Creator. A woman's mind, from the delicacy

delicacy of her frame, and prevalence of her passions, is liable to so many excesses and inordinate motions that had such causes been productive of marks or monsters, they would certainly have been much more frequent. Besides, it ought to be remarked, that conception does not depend upon the will of the mother, but results from the nature and disposition of the several animal functions, and therefore happens whether her imagination be for or against it: Surely then it would be extremely irrational to suppose its influence over the Fœtus greater than that which prevailed over her own body.

By the most accurate examination of parts connecting the child to the womb, there does not appear any continuation of vessels between one and the other; for the umbilical vein and arteries proceeding from the first, terminate at the exterior surface of the placenta; and those vessels which are derived from the uterus, without any communication with the former, enter the cellular substance of the same placentary mass, and go no farther.

No anatomist has ever yet been able to demonstrate the existence of nerves in the umbilical cord, which is the medium of all intercourse between the mother and child. How then can the imagination of the first operate or extend its influence to the last, without the mediation of nerves, which
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are the organs of all sensation? With as much reason it might be supposed, an impression made on the mother would be transferred to the infant sucking at her breast. It has indeed been asserted with reason, that several parts are endowed with sensibility, where no vestige of nerves is to be seen; but granting that the funis was nervous; the placentary vessels continued from it, are not supposed at first to adhere to the uterus, when the tender stamina of the Embryo would be most susceptible of violence or change; and even when an attachment commences, that is only effected by a superficial *contiguity of parts, and not by any continuation of vessels from one to the other*, as already observed. In a word, the umbilical cord, is plainly intended for the purposes of circulation, not sensation; and as it springs from the Fœtus, is destitute of nerves, lest the infant should have suffered pain when that part was divided after its birth.

Thus may anatomical knowledge clearly convince us, that the *Fœtus in utero* has a body perfectly distinct from that of its mother, and is not affected by her sensations, which are entirely confined to her own system. Agreeable to this supposition, many instances might be brought to prove the one sleeps whilst the other is awake, the one is affected with pain when the other is at ease, and that each has a circulation of blood peculiar to itself. The imagination of the mother can therefore

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have no power to alter the stamina of the Fœtus, or change the mode of its existence, either by giving it supernumerary parts, or taking away those already formed. This reasoning is still farther confirmed by the following circumstances; first, because infants have often had marks, where there was no preceding disturbance in the mother's imagination; and secondly, because her imagination has often been violently affected where the child was free from any such marks or deformities. History informs us that *Rizzio*, secretary to *Mary* Queen of Scots, was stabbed in her presence whilst she was pregnant, but notwithstanding the horror from thence impressed upon her mind, she was delivered of a child, afterwards *James* the first, who had not the least appearance of blood-colored marks or stigmata.

But seeing that marks and monsters do sometimes happen, how are they to be accounted for, or from what causes do they arise? Perhaps from some accidental violence disturbing the tender Embryo, as yet in a gelatinous state; or from a diseased stamina, where its very rudiments are monstrous and deformed. Sudden frights are observed to occasion abortion, by what *Hoffman* calls *convulsio uteri*; and it is probable that the same preternatural pressure, by producing constriction of the uterus, may forcibly act on the Embryo, and by obstructing the juices in its extremities, occasion those parts to wither and drop off for want of circulation.

Eller

Eller supposes, that flesh-marks in the child arise from a fault of the womb, which, by pressing on the surface of the skin and obstructing the arteries, may throw their blood upon the lymphatic branches, and convert them into blood vessels, which being spread on the skin, will tinge it with a red color. We are seriously told, marks resembling red currants, cherries, &c. become more red and vivid when those fruits are ripe; to which, if any reply is necessary, it might be answered, that the paleness or florid color of the skin depends on the quantity of blood passing through the capillary vessels on its surface; the last of which will therefore always be greatest in warm weather, when such fruits are in season. But if imagination had power to produce colors, as some would weakly suggest, why should not children be marked with grapes, or green gooseberries, as well as with cherries or red currants, since it may be presumed the mother will as often have longings for one as the other?

Before we dismiss our present subject, it may be necessary to remark, that monstrous Fœtuses are also common in brute animals; although our selfishness and pride will not allow them the exercise of those rational faculties which are supposed the sole cause of such deformities in the human species. In short, a *lusus naturæ*, or preternatural conformation of parts, is frequently known to prevail in plants as well as animals, which

shews, that such uncommon appearances in the last arise from mere corporeal agency, or the perverted laws of motion, and have noting to do with imagination or operations of the mind; a presumption, that, in the first, the cause is the same.

As by chemistry the texture of natural bodies is unfolded, and their several qualities disclosed; so the elements of human bodies, as well as the diseases to which they are subject, are illustrated and explained by the Science of Midwifery; for it brings us to an intimate acquaintance with the state and condition of man, even from the first stamp of his existence.

Here it may not be improper to subjoin the following queries, most of which belong to the Obstetric Science, and therefore will hereafter be duly considered.

An locus certus conceptui propius assignari queat?

An, ab origine monstra sunt, vel causis accidentalibus sic fiunt; & quænam sunt eorum causæ?

An, et qua ratione seminis potestas parentum, affectiones ingenitas mores, robur, formæ similitudinem, staturam et reliquos characteres una traducat?

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An, et quomodo semen maris, fæminam virtualiter contineat, et semen fæminæ virtualiter marem? & quænam est causa sexuum differentiæ?

An fœtus omnia viscera, vasa, artus simul habeat; an verò plane mutet formam, primò pisciculo, deindè amphibio, postea respiranti proximam?

Quibus experimentis precipuè indagari valeant fœcunditas et sterilitas mulierum?

An superfœtatio potest?

An alatur fœtus per os, per umbilicum, an per utrumque?

Quid de legitimo tempore partûs humani statuendum sit?

We shall now trace the progress of Midwifery, and remark the advances it made among the ancients and moderns, till arrived at its present state. It is not however my design to give an historical account of the several authors on this subject, in chronological order; for as their writings are almost innumerable, such an undertaking could not come within the narrow limits of an INTRODUCTORY LECTURE:

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I shall therefore, Gentlemen, only mention those of the greatest note, and lay before you a general view of their opinions and practice.

In the first ages, women in labor were attended by their own sex, who gave their assistance without method, being rather directed by necessity than skill or choice; hence, the progress and improvement of this art must have been extremely slow. In difficult cases, compassion naturally inclined them to enquire into the cause of such difficulties, by touching the patient in the time of her labor-pains; and in this manner they began to improve their slender knowledge, and made some observations that were of service in their future practice. For example, they could not help remarking, that in most cases where the infant's head presented, the patient was speedily delivered by the simple effect of the labor pains; therefore they concluded this was natural.

On the contrary, when the arm, or any other part presented, the pains were insufficient to effect the birth; and as they were ignorant of the proper methods of assisting, the mother generally died undelivered; consequently, they had great reason to suppose that all such cases were dangerous and preternatural. Hence sprung the division of labors, which they distinguished into natural and preternatural.

Midwifery

Midwifery at this time being chiefly exercised by women, frequently fell into abuse. To remedy this evil, we are told a law was made at *Athens*, excluding them from practice, and appointing men only, to take upon them the province of delivering women, and directing medicines for the several diseases to which they were subject; but such was the effect of custom, that the legislative power was incessantly importuned, and at last prevailed upon to revoke this edict, and to restore women to their former privilege of practising this art.

I think there does not appear sufficient reason for setting female practitioners aside, provided they are properly instructed, and not only able to distinguish when there is danger, but conscientiously endeavour to avoid it, by sending for farther assistance in time, which too frequently is neglected. This is so far from disparagement to them, that it makes a necessary part of their duty, for which they ought to be commended; and therefore, when men of the profession are called in, they ought not to brow-beat and suggest hints to their disadvantage, but treat them with becoming civility, and, if possible protect them from blame; as an injury to their reputation would be followed by the loss of business, and might affect the interest of a family which they are industrious to maintain.

Cleopatra

Cleopatra and *Aspasia* were the two female proficient in this art, who by their practice and writings were most distinguished and made known to posterity; an account of the first may be found in the *Harmonia Gynæciorum*, and the last is particularly mentioned by *Ætius*, who has transcribed several chapters from her works, relative to the management and delivery of women.

The progress and improvement of Midwifery may be dated from the time of *Hippocrates*, who practised in Greece four hundred and sixty years before the birth of Christ. He wrote several books professedly on diseases of women under the following titles: *de Morbis mulierum*; *de Superfætatione*; *de Fœtus in utero mortui extractione*; *de Virginibus et de Sterilibus*. Some of these tracts are accounted spurious, and the rather, as it was five hundred years after his death, before those works were collected into a body by *Artimidorus* and *Diascorides*, two physicians of Alexandria, in which several contradictions are to be found.

Erotion took great pains to point out the true works of *Hippocrates* but makes no mention of the book *de Virginibus*, nor that *de Natura Muliebri*. *Mercurialis* also has placed the books *de Natura Muliebri*; *de Morbis Mulierum*, and that *de Sterilibus*, in the third class, as writings in which *Hippocrates* had no share.

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The medicines recommended by this author are odd and indelicate, and his theory extremely erroneous. In the hyfteric passion, he asserts that the womb changes its place, and rises to the stomach and heart; so that one would be apt to conclude, he had never seen its situation in the dissection of a human body; otherwise, he could not have omitted to remark its connection to the surrounding parts. His doctrine of conception was adopted by authors of the first rank, and adhered to, even till the sixteenth century; but his method of practice deserves no attention, for it appears by a survey of his works, as well as those of the antients in general, how imperfectly the Obstetric Art was known; so that if we compare *Hippocrates* discoursing on this subject, with the same *Hippocrates* speaking of diseases, pointing out their distinctions, and prognosticating their various events, *nil fuit unquam tam dispar sibi*. In the first, he is a stranger to the structure and functions of the parts appropriated to generation and parturition, but in the last, is wonderfully sagacious, accurate and just; and therefore, as a nice observer of Nature and a faithful recorder of her operations, he has stood the test of all ages, and justly continues admired and esteemed to the present time.

Aristotle also wrote on the subject of Midwifery, particularly on the generation of animals; and though his rules for

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practice are few and scarcely to be regarded, yet in his seventh book on this subject are to be found several observations worthy of remark, under the following heads: Of the signs of puberty in men and women; of the menses; the signs of conception, and symptoms which happen from thence to the time of labor: Also the situation of the Fœtus in utero, the child's birth, and of the placenta and funis. He observes that the constitution, both of the male and female, undergoes a considerable change at the time of puberty, and that women who have not the periodical flux are generally barren, although some have been known to conceive, who never had the discharge at all. He asserts, that women suffer more than quadrupeds in the time of parturition; that the Fœtus is nourished by the funis, and naturally presents with the head; that the period of gestation is various in the human species, but that animals bring forth at a stated time, and with their bones perfectly formed. But the most extraordinary of all his positions is, that blind and lame children, are generated of blind and lame parents; from which it is plain he had adopted the doctrine of *Hippocrates*, who asserted, that the semen is a combination of organical particles, derived from the several parts of the body, and that, being associated, they form a *genitura* or rudiments of the Embryo.

Cornelius

Cornelius Celsus, who might justly be called The Latin Hippocrates, is the next author of note; he lived in the reign of *Tiberius*, A. D. 35, and wrote a treatise on medicine in the Latin tongue, much admired for its elegance of style; but whether he was really a physician, or a man of uncommon understanding, whose natural genius led him to study that science, is not certainly known, for he wrote on war and agriculture as well as physic. In his seventh book he treats on the diseases of women, and the method of extracting a dead Fœtus, but what he lays down is chiefly borrowed from the Greek physicians, particularly *Hippocrates*, so that he is rather consulted as the standard of elegance and true purity of style, than for any thing remarkably instructive on this subject.

Galen of Pergamus, a celebrated Greek physician, was born A. D. 132, and lived in the reign of *Adrian*, about six hundred years after the time of Hippocrates; he travelled through several provinces of the Roman empire, and afterwards resided at Alexandria in Egypt, which was then the most celebrated school of medicine in the world; but at last returned to his native country, where he died. He appears to have been a man of great learning, and a subtle discerning genius, but he was assuming and vain-glorious, arrogating to himself the highest honors, and at the same time attempting to de-

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preciate and lessen the authority of other physicians. He is allowed to be the best commentator on the works of *Hippocrates*, though in his relation of things he is circumlocutory and diffuse. He wrote several books on the subject of Midwifery; namely, one *de Semine*; *de Formatione Fœtus et de Uteri dissectione*, where he lays claim to the discovery of those tubes belonging to it, which were afterwards said to be found out by *Fallopian*.

To enumerate the several antient authors who have written on the present subject, would be tedious and unnecessary; from *Galen* therefore, down to the time of *Paræus*, it will be sufficient only to mention those of principal note.

Ætius, who lived A. D. 380, left a system of physic in Greek, which was translated into Latin by *Cornarius*, and printed at Basil under the title of “*Contracta ex Veteribus Medicina*,” the last book of which treats fully and judiciously on diseases of women. He describes the situation, magnitude and figure of the uterus, and gives a circumstantial account of difficult births; he likewise takes notice, that delivery may be retarded by the too early rupture, or preternatural rigidity of the membranes containing the child, and directs what is necessary to be done on those occasions. His cautions against violence, when the *os uteri* is closed by inflammation

flammation, are rational and well adapted to the disposition of the parts; in short, though he is little more than a compiler from *Galen*, *Soranus* and others, he seems an author of exceeding merit and candor, always naming the originals from whence his quotations are taken, which in general are judiciously chosen and well applied.

This was the state of the *Obstetric Art* among the Greeks and Romans, but when the western empire was invaded and ravaged by Goths and Vandals, a barbarous people and enemies to the polite arts; the several sciences, for want of patronage, began to languish and at last were neglected and forgot. The fate of learning in the east was much the same soon after, for the *Saracens* subdued Egypt, and destroyed the famous library at Alexandria, the books being dispersed by the Calif's order, and burnt at the several Bagnios. But in proportion as learning declined among the Greeks, it began to flourish among the Arabians, who extended their empire over Asia, Africa and Europe, under the Calif *Almamon Abdalla*, who reigned A. D. 813, and caused the Greek authors to be translated into the Syriac and Arabic tongues; for several of them were fortunately preserved, although the public library was destroyed.

Avicenna, a Mahometan phyfician, was born in Perfia, and lived A. D. 1000. He wrote a book called *Canon Medicinæ* divided into five fections; in the third he fpeaks of conception, pregnancy and delivery, and alfo the diforders peculiar to women. Though the forceps is fupposed a modern invention, he mentions that inftrument, and fuch as was manifefly intended to fave the child.

Albucafis, an Arabian, is fupposed to have lived A. D. 1085, and likewise treats on difeafes of women: He is remarkable for delineating and defcribing the feveral inftruments then in ufe; among the reft a figure of the forceps, and of an inftrument called Impellens.

From this period to the year 1200, the Europeans, by their commerce with the Saracens, became acquainted with the fciences; hence, the art of phyfic was cultivated, and at laft gave rife to two of the moft ancient colleges of medicine in Europe; namely, thofe of *Salerno* and *Montpelier*, where the doctrines of the Arabian phyficians were principally taught, till the taking of *Constantinople* by the Turks, in the year 1453; for at this time the feveral learned men fled from thence, and took refuge in different parts of Europe, particularly in Italy and France, where they carried the fciences; and as learning revived, men of genius now began

to study *Hippocrates* and the other Greek physicians; and the works of *Avicenna* and *Rhazes*, whose authorities had long prevailed, were now justly rejected. Thus was the Grecian art of medicine restored, and by degrees a solid system of physic established, by which the causes and cure of diseases were more rationally considered, and accurately distinguished.

From this period to the time of *Paræus*, the great promoter of *Obstetric knowledge*, the general practice of the ancients was as follows: If the infant did not present naturally they shook the woman and altered her position, a method so irrational, that it could answer no purpose but that of tormenting the patient. The operator also attempted to bring the head to a right presentation, but if he failed, he then endeavoured to deliver by the feet; if none of these methods succeeded, it was treated as a dead child, and extracted with crotchets; but if it was too large to pass whole, they dismembered and extracted it piece-meal.

In the year 1575, *Paræus*, a French author, in his twenty-fourth book, where he treats on generation and the delivery of women, entirely rejecting those irrational proceedings of the ancients, in all preternatural cases, expressly directs the child to be turned and delivered by the feet, which was a capital

capital endeavour towards the advancement of the art; for by this judicious method many women were saved, who otherwise must have died undelivered.

From this time the improvements in Midwifery were many and great, both by manual operation and the invention of new instruments. *Guillemeau*, who was a scholar of *Parès*, also wrote expressly on the same subject, and improves much on the rules laid down by his predecessor: In profuse floodings, he orders the membranes to be broken and the patient speedily delivered; he also takes notice of the ruptured uterus, some instances of which had fallen under his observation.

From the time of *Guillemeau*, till that of *Mauriceau* (being upwards of half a century) several useful tracts were published. *Severinus* published a book on pregnancy and delivery; and in the year 1628, *G. Nymmanus* printed his dissertation *de vita Fœtus in utero*, wherein he proves that the child may survive a considerable time after the mother's death, and therefore admonishes magistrates, and those who have the direction of public affairs, to permit the opening of such women as die undelivered, in order to preserve the infant.

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The works of *Sennertus*, a celebrated professor of physic at Wittemberg, were published in the year 1640; in which is to be found a valuable practical treatise on the diseases of women and children; where the description of the symptoms appears accurate, and the intention of cure is laid down with clearness and profound skill.

A. D. 1668, *Mauriceau*, after much experience at the Hotel Dieu, published a book on Midwifery, which came nearer to a complete system, in what regards practice, than any thing which went before it; but his doctrine of conception is false and erroneous, and his theory vague and irrational, though his practical aphorisms are judicious and excellently deduced.

Various now were the authors on Midwifery; for *Dionis*, *Peu*, and *Portal* published their several works, and not long after, *Saviard*, who practised at the Hotel Dieu, also published several observations on female diseases and the method of assisting in difficult labors. *Daventer*, a Dutch physician, printed his book on the art of Midwifery in the year 1701, and became eminent by remarking, that the most common cause of difficult labors arises from an *oblique situation of the uterus*; the fallacy of which opinion will be shewn in the subsequent Lectures. Besides, though this passed for a discovery

covery of *Daventer's*, it was observed by *De Graaf* and *Winckler* long before. Those points of doctrines for which *Daventer* most deserves commendation, are to be found in his observations on *Touching*, from which many useful indications may be taken concerning the event of labor.

From this time several detached pieces were published, though nothing very considerable, till *Lamotte's* book appeared, in which are to be found many judicious observations, candidly and circumstantially laid down, and therefore worthy of remark; but this author, though a modern, probably knew not the use of the *Forceps*, for in laborious cases, where the difficulty is great, he directs the child to be turned and brought by the feet.

About the year 1721, many curious and uncommon cases were published by the celebrated *Ruyfch*, and also his tract *de Musculo in fundo uteri observato*. Soon after, *Vaterus* printed his *dissertatio pathologica de utero gravido*; and *Puzos*, in the memoirs of the Royal Academy of Surgery at Paris, attempts to shew a more safe and gentle method of proceeding in uterine hæmorrhages than had before been practised on such occasions, all which will hereafter be duly considered.

In

In the year 1743, *Noortwyk*, a Dutch physician, published at Leiden his accurate anatomical history of the gravid uterus, which merits the perusal of all those who purpose to study Midwifery. *Levret*, a celebrated professor of Midwifery at Paris, has also from time to time published three volumes on the subject of Midwifery: In the first he treats on that art, as demonstrated on mechanical principles; the second comprehends his observations, with the description and figure of the different forceps in use. The third volume treats on the polypus, and describes the figure of his instruments for tying polypose tumors of the uterus, in a manner more safe and easy than hitherto known.

Rodererus, professor of Midwifery in the university of Göttingen, in the year 1759 printed the second edition of his *Elementa Artis Obstetricariæ*, in which the practice of Midwifery is concisely laid down; but as a public teacher, whose doctrine may have considerable influence on those who attended his lectures, it is much to be regretted, that he shews an uncommon propensity to the use of instruments, even those of the destructive kind. He also published his anatomical tables of the gravid uterus, where some of the parts are finely delineated.

About the same time, *H. Crantz*, professor of Midwifery at Vienna, printed a tract *de rupto utero in tempore partus*, and also

also his *dissertatio de re instrumentaria*, in which he gives a full historical account of the different instruments used in Midwifery. He asserts, that the use of the crotchet is never required, although they have often been applied; he thinks it ought to be deemed homicide, where the head of a living child is opened, even though the life of the mother should be in danger; and therefore censures *Rodererus*, with uncommon severity, for inculcating such practice. The author indeed shews humane attention to the infant, and it would not have been less commendable, had he been a little more merciful to the reputation of his brother professor.

This naturally leads us to consider the *use and abuse of Instruments*, which the passion for novelty has multiplied to an extravagant number. Some of them, indeed, particularly the *Forceps*, are found to be safe and effectual, in preserving the life of the mother and child; but wherever delivery can be brought about by the simple force of labor-pains, all instruments are unnecessary and improper; since it would be injudicious and absurd to substitute art, for the performance of that which might be better and more safely accomplished by the powers of nature only.

Those who are not sufficiently conversant in practice, from motives of fear, which always magnify danger and suggest
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the worst, are often led to a more precipitate application of instruments than is necessary or consistent with the patient's safety. On the other hand, there are some who exclaim against all instruments whatever, pretending they are dangerous and unnecessary; but it may with reason be asked, whether this does not arise from vanity or artifice in such declaimers, and an endeavour to recommend themselves to the good opinion of timorous and weak-minded women, who are alarmed at the very name of an instrument, and had almost rather die, than call in the assistance of those who are said to make use of them? for all such as have candor and skill must allow, that instruments, particularly the *Forceps*, are sometimes so absolutely necessary towards the preservation of both mother and child, that he who either wants dexterity or resolution to apply them, would be deficient in the duties of his office.

I did intend, in this place to have been more particular on the use and abuse of instruments; but as it is first necessary to know the structure of the parts concerned in parturition, before we can have a just idea of their application, I shall defer what is farther to be said on that subject, till we come to the Lectures on laborious cases; where the different instruments will be examined, by taking a comparative view of their several advantages and defects; particularly the *new Forceps with three blades*, hereafter described and illustrated by two copper-plate
 O prints,

prints, exhibiting the utility of the third blade when the child's head is locked within the brim of a *narrow pelvis*.

Moubray, Chapman, and Ould; Giffard, Smellie, and Burton, are the principal English writers on the subject of Midwifery. Besides a due attention to many of the authors already mentioned, I shall hereafter occasionally remark such *new observations* and *capital improvements*, as have been laid down from time to time by the most eminent *modern Professors* of Midwifery in different parts of Europe.

Whoever teaches a science, ought to present those intending to study it, with a clear and comprehensive view of all its branches, and the means most conducive to a perfect knowledge of the whole. Midwifery, respecting its operative part, may be called an art; but as it comprehends the nature and treatment of diseases, it ought also to be considered as a science. It may be divided into Theory and Practice: Theory consists in a competent knowledge of anatomy and physiology, particularly what relates to generation and the menstrual flux; œconomy of the gravid uterus; the nature of parturition; and the doctrine of diseases incident to women and children. The method of assisting with dexterity and skill in laborious and preternatural labors, and acting with judgment in cases of danger
or

or difficulty, constitutes the practical part. Without a previous and distinct knowledge of all these, no one deserves the name of *Accoucheur*, for if he ventures to give advice or assistance not founded on rational theory and the established rules of his profession, he will act like a bungling mechanic, who vainly attempts to repair a complex machine, without being acquainted with the several wheels and springs which compose it, or the principles upon which its motion depends.

From regard to the safety of women, and the public good, as well as the credit of the profession, it is much to be wished, that none were permitted to practise Midwifery, till they had given sufficient testimony of their skill, by *due Examination* before gentlemen appointed by legal authority, for that purpose, as usual in other branches of physic and surgery. We should not then find the town and country over-run with ignorant pretenders of both sexes, who impose on the credulous, and supply their want of knowledge by arrogance and vain-boasting, or a slavish submission to the obstinacy or avarice of old women and nurses.

Where humility is joined with ignorance, it should rather excite pity than indignation; but it is truly observed, that those who are most deficient in understanding are least able to perceive it; and instead of making up by diligence and application what
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they want in intellect, they are generally, of all others, the most self-conceited and presuming. Did the evil rest with such unworthy members of society, it might be passed over in silence; but when it affects the immediate safety of such as *intrust them with their lives*, it cannot be too seriously represented, or too openly exposed. Hence it must appear an act of manifest injustice to the public, and a real injury to those of the medical profession duly qualified, whenever *professors* are prevailed upon to sign *certificates* for such as are not qualified at all.

The patient's life more immediately depends on the operator's skill in this, than any other branch of physic or surgery; and therefore it is the indispensable duty of every one who engages in it, to render himself duly qualified. He ought not to suppose, that a course or two of Lectures negligently attended, is sufficient for this purpose, and that he may then set out in practice with reasonable hopes of success; on the contrary, after obtaining a rational theory, he should have *frequent opportunities of practice*, without which he will never acquire dexterity of hand, or that resolution and firmness of mind, so necessary in all cases of *danger and difficulty*. Instead of this, his behaviour will be timorous and confused, and no one can reasonably expect to engage the confidence of others, who apparently distrusts himself. Such conduct will always subject him to censure, and where another of the profession is sent for, and performs

performs what he himself is unable to do, it will degrade his character and injure his reputation.

The force of habit is so remarkable in the difficult operations of Midwifery, that it may be truly said, *'tis Practice which makes perfect*; for the hand gains strength and dexterity in proportion to its use, and the mind being familiar with danger, becomes more circumspect and deliberate than before; whereas, fear enervates the hand, destroys recollection, and puts the thoughts into confusion.

Whatever knowledge a man may possess, or however respectably he may appear in his profession, he has a right to regulate his conduct by the rules of true policy, and to pay due attention to his own interest; but this is not to be done by timorous and time-serving deportment; not by chiming in with the prejudices of the people; by being in league with nurses and ladies' women, or paying compliments to the wealthy and great at the expence of truth; not by imposing on the ignorant with pompous and pedantic jargon, or astonishing the vulgar with miraculous and pretended cures; but by principles directly opposed to all these. If such artifices degrade the meanest of mankind, surely they are unworthy of men professing a liberal science, whom no interest should prompt to base and ignoble proceedings, even could they be supposed to escape detection and contempt.

The privilege of attending a public Lying-in Hospital has long been wanting in this great metropolis, to perfect students in the true practical knowledge of Midwifery; and it affords me much pleasure, that I have been able to obtain this singular advantage for my pupils at the WESTMINSTER NEW LYING-IN HOSPITAL; where near *five thousand women have already been delivered under my direction*; and where an additional number will now be admitted, by order of the Governors, in consequence of new subscribers, benefactions, and legacies since its first institution.

The utility of permitting students, when duly qualified and under proper regulations, to attend *Public Hospitals* is so obvious, that this custom was adopted in France many years ago, and is now allowed in other parts of Europe. Such privileges manifestly tend to the improvement of Midwifery, and therefore will be productive of universal good, by extending the benefits of that art to different parts of the kingdom, where those students may hereafter chance to reside; and who, from such previous advantages, will be duly qualified in dangerous cases to give their assistance with judgment and dexterity. Hence, many women, the rich as well as the poor, will be preserved, who otherwise might have fallen victims to the ignorance or insufficiency of unskilful practitioners.

It

It was owing to the wise and early institution of Lying-in Hospitals in Paris, and to the peculiar advantages and improvements arising from them, that students in Midwifery formerly resorted thither from other nations; but though this Art is no where more rationally now taught, or more judiciously practised than in London; it must be confessed that we were at first indebted to the French for many of its capital improvements.

Nothing will more redound to the public good than humane attention to the health and well-being of the industrious poor. A man of this profession by his advice and timely assistance, may often administer relief and comfort to the afflicted, and even preserve life. To those who are blessed with sympathy and benevolence of heart, this will afford the most exalted pleasure, especially where such assistance is given to women in the hour of their distress, who are to be considered as the weaker sex, and unable to help each other.

At such times, none, who are worthy to be called men, will desert even the poorest of them; their nerves are strung to the same sensations of pleasure and pain as those of the rich; they are formed of the same materials, and ordained to the same end. Let us look back to our own origin, and we shall find that once we were parts of themselves; for we
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sprung from their bodies, we were nourished by their blood, and should have perished in the very commencement of our being, had we not been sustained, nursed up, and cherished on their tender bosoms, and protected by their unwearied care.

It would be cruel to take fees of those who suffer from the extremes of poverty and pain, especially where Hospitals are wanting for their reception; even a trifle, scarcely of benefit to the receiver, would be more than they could spare, who earn their daily bread with the sweat of their brows, and are often unable to supply their needy families with the common necessaries of life!

When we come to consider the office of an *Accoucheur*, we find it attended with great fatigue of body and anxiety of mind. His patience will often be put to severe trials by the obstinacy and caprice of those under his care; by the petulance and self-sufficiency of ignorant nurses, or the malignant whispers of malice or envy. The life of the patient and his own reputation are depending, and where the event is fatal, he will frequently meet with undeserved censure and the most illiberal treatment; especially, among the lower class of people, who, being swayed by prejudice and vulgar errors, judge without reason, and condemn without mercy. This will render
his

his attendance irksome and tedious; but as long as human nature continues what it is, he must expect sometimes to meet with such unwelcome behaviour. The tongue of slander is as much at liberty as the tongue of truth, and since it is not in his power to prevent the first from proclaiming injurious falsehood; his principal happiness will be to act in such manner as not to deserve it; and being thus conscious of having done his duty, that will afford him consolation which nothing can take away.

Besides these qualifications, there are others no less necessary for the *Accoucheur*, in common with the rest of his profession. Every one is a judge of his appearance and deportment, though not of his skill; the method of pleasing, as far as it is conformable to the principles of honor and rules of good breeding, ought therefore to make no inconsiderable part of his character: Of this the celebrated *Hoffman* was so sensible, that he published his *Medicus politicus*, and *Bohnius* also wrote *de officio medico*; but what has been laid down on that subject by the late Dr. *Gregory* of Edinburgh, is preferable to the rest; having delivered his sentiments with becoming freedom, and the zeal of a physician honestly solicitous for the credit of his profession, and the advancement of true medical knowledge.

Whoever practises Midwifery, ought to be sober, patient, and discrete, polite and easy in his address, and of a modest and humane disposition; yet possessed of so much resolution as not to be alarmed or disconcerted in cases of the greatest danger. At all such times, he should duly consider and deliberately attend to the symptoms and circumstances before him, taking care to proceed with the distinct exercise of his judgment and reason, as a few grains of error, or proper discernment, in extreme danger, may turn the scale for life or death. When the patient's situation is truly alarming, and the event likely to be fatal, her relations and friends should be apprised of it; and where the operator finds the case singularly perplexing, another of the profession eminent for his candour and skill, ought to be called in; but, whether in consultation or speaking to the attendants he should deliver his opinion with clearness and prudent caution, avoiding all such pedantic phrases and mysterious terms of art, as are fitter for conjurors than men of science. He should avail himself of no illiberal methods, or attempt to filch a good name at the expence of another's reputation; but in all things, as becomes a man of honor and true benevolence, endeavour to promote the good of society without ostentation, to support the credit of his profession without pride, and to practise condescension without artifice or meanness.

Whatever

Whatever assistance women may at this time require should be regarded with the utmost delicacy; their situation being only such, as it has ever been and still must continue according to the stated laws of Nature. But, to inculcate what must be obvious to all men possessed of a sense of their duty, and the common principles of humanity, would be an unnecessary waste of time. Should one in a thousand be found of a different character, surely, it would be inconsiderate and unjust to censure the whole profession, for the delinquency of so small a part. It is not sufficient to say, that those who practise Midwifery have frequent opportunities of acting dishonorably; for if the means of violating their faith and honor could be proved the cause of doing so; all mutual confidence would then totally cease, and mankind in general, as well as they, would of course be immoral and base, since there is no station or department in life which does not daily afford opportunities of becoming vicious.

The Plan which I propose to follow, in the ensuing COURSE of LECTURES, is exactly conformable to the order of particulars laid down in my SYLLABUS, which I have therefore here annexed as a SPECIMEN of the whole.

From thence Gentlemen, it will appear, that I mean not only to lay before you, the *Theory and Practice of Midwifery*,
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according to the Doctrines of the most eminent *modern Professors of that Art*, but also to expatiate largely on the Nature and Treatment of the various *Diseases incident to Women and Children*, whether *acute* or *chronical*, being a branch of medical science highly important, yet of all others most imperfectly known to those who are young in the profession. I shall likewise add some general Reflections on what is called *clinical Practice*, and shew the utility resulting from it, in the cure of Diseases; as well as the great advantage of examining the morbid appearances in such bodies as are occasionally directed to be opened at the Westminster Lying-in Hospital.

In short, I shall pay the utmost regard to whatever is most useful in practice and endeavour to preserve such a regular succession of circumstances, as tends to render the following COURSE OF LECTURES as clear and instructive as my abilities will allow. Here I must request, that those who do me the honor to attend as *Pupils*, will take down their *Notes* with such care, as neither to discredit themselves or misrepresent me. They will do well to consider, that their *future gain, and advancement in the world* will chiefly depend on the rank they may hold in their profession, for address, dexterity and skill, and that those qualifications can only be attained by assiduity and application.

The early reading of Books, during their attendance at Lectures does not seem eligible, for it often misleads the student, and gives a false bias to his judgment: It will first be requisite to acquire *true Principles of the Science*, with a competent share of *practical Knowledge*, and with such guides to direct, he will be less liable to error, in adopting many things, which ought to have been rejected, as exceptionable.

To conclude; the great importance of the *Science of Midwifery*, whether considered in a moral or political view, is sufficiently evident; and was its utility only confined to the *Preservation of women and their tender offspring*; that alone would effectually recommend it to all good and sensible minds; but, by a review of its several advantages, it appears a necessary *Branch of Philosophy* as well as *Physic*; the *public Administration of Justice*, under certain circumstances, calls for its assistance; and even the *Cause of Religion* itself has been promoted by its extensive influence. It may, therefore, be truly said, that the *Obstetric Art* contributes to the good of society, and the general interest of mankind, in a manner superior to all other sciences.

I shall now, gentlemen, trespass no longer on your time; for I presume it will evidently appear, from what

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has already been said, that all those who propose to study Midwifery, and to become deservedly eminent in their profession, ought principally to avail themselves of *practical Knowledge*, founded on a previous *rational Theory*; and not indolently content themselves with that superficial and imperfect method of being instructed, which has hitherto so long prevailed; to the danger of the patient, the discredit of the science, and the injury of their own reputation.

SYLLABUS

S Y L O L A B U S

OF

L E C T U R E S

On the THEORY and PRACTICE of

M I D W I F E R Y :

I N C L U D I N G

The *Pathology* or general Doctrine of *acute and chronic Diseases* incident to
Women and Children, with their *Treatment and Cure*.

* * For the clearer Demonstration of operative Midwifery (whether simply
by the Hand, or *Application of Instruments*) the several Methods of as-
sisting in *laborious and preternatural Labours*, will not only be described
according to the most approved modern Practice, but likewise distinctly
shewn by an *artificial Representation of each difficult Case*, upon *Machines*
of a new Construction.

The whole will be illustrated by such *Anatomical Preparations* as are ap-
plicable to each Lecture; with various Observations, extraordinary Cases,
and necessary Cautions; but particularly, by *real Labours*.

By J O H N L E A K E, M. D.

Member of the Royal College of Physicians, LONDON,

and PHYSICIAN to the

WESTMINSTER LYING-IN HOSPITAL,

At his House in *Craven-Street* in the *Strand*.

LONDON, A. D. 1782.

P R O P O S A L S.

THE *Students* who attend these LECTURES, for their more expeditious and effectual Improvement, will be admitted *Pupils* at the *Westminster Lying-in-Hospital*, and afterwards receive a *proper Certificate* of their Qualification and Attendance; — a *Privilege unusual elsewhere*.

Expence of attending the first Course - - - - - 4 Guineas—and
For every future Course - - - - - 2 Guineas

Ten Guinea
Pupils.

} *Ten Guinea Pupils* will be entitled to attend the Lectures for the Space of *one Year*, or until they are duly qualified; they will also be admitted *Pupils* at the *Hospital* for *six Months*, where they will have frequent Opportunities of *extensive Practice*, and of being present at *laborious* and *preternatural Cases*, or wherever there is *Danger* and *Difficulty*.

Pupils having
extra Privile-
ges.

} Those who want sufficient time to wait for Instructions, in the usual Manner, will be allowed an *Additional Number of Labors*, with other Advantages tending to qualify them the sooner; on paying in Proportion for such *Extra Privileges*.

House-Sur-
geon.

} An *Hospital-Assistant to Dr. Leake* will be admitted for *six*, or *three Months*, and entitled to *Extra Privileges*; viz.

He will attend the Lectures as a *perpetual Pupil*, and be allowed a double share of Labors, so as to render him expert and judicious in the *Art of Touching*, upon which his future Success will greatly depend.

He will not only be allowed the Privilege of being present at all *preternatural and laborious Cases*; but also have the advantage of seeing the treatment of the various Diseases incident to *Lying-in Women*, namely, those of *Child-bed Fever*, *Floodings*, *Convulsions*, &c.

He will be permitted to examine the *morbid appearances* of bodies opened at the Hospital, with a View to illustrate the Cure of such Diseases as were imperfectly understood; and also to take *clinical minutes* of such remarkable cases as occur during the time of his attendance.

* * * The terms of Residence at the *Hospital* may be known by personal Application to Dr. LEAKE; and likewise of receiving *House-Pupils* in Craven-Street.

The *Winter Course* of Lectures will begin the first Monday in *October*, and continue for *one Month*, from time to time, throughout the Year, as advertised in the *Public Papers*.

The *Pupils* being introduced at the Hospital, in rotation, according to the date of their commencement at Lectures, *such as enter their Names early* will attend Labours so much the sooner, and have more Time and Opportunity to see the Variety of Practice in *laborious and preternatural Cases*, &c.

Before the Establishment of *This Hospital*, in which near *Five Thousand Women* have been delivered; it was extremely disagreeable to attend Labors at a great distance, among the *lowest Class of People*, in Garrets and Cellars, where a number of Pupils were obliged to attend the same Patient; From the indecency of this Method, they were often exposed to *Insults*, and for all their Trouble, could acquire no *true Practical Knowledge*; because, where so many were present at the same Labor, besides the confusion it occasioned, only one of them could properly be said to deliver the Patient; and as they only touched her by turns, *not one of the whole Number could exactly know the natural Progress of the Labour from beginning to end*; on the contrary, *every Pupil*, after his Introduction at *this Hospital*, is called *singly* to the Labors, and attends her with the same *Decorum* as if she was a *private Patient of his own*.

Hence it must be evident, that a *Certificate of Attendance* at this *Public Hospital* will carry with it much more Credit and Consequence than that of being called to *casual Labours* only.

Female } *Female Pupils* may be instructed, and soon duly qualified for their own
Pupils. } *Practice*, by being allowed to reside in the Hospital.

Farther Particulars may be known at the Doctor's House, or at the WESTMINSTER LYING-IN HOSPITAL, near the Bridge; which is commodiously situated for the Attendance of Pupils, in a middle Space between St. Thomas's, St. George's, and St. Bartholomew's Hospitals.

USE of the APPARATUS.

For the clearer Demonstration of Operative Midwifery, the several Methods of assisting in Difficult and Preternatural Labors, will be artificially represented on Machines of a new Construction, according to the most improved Modern Practice.

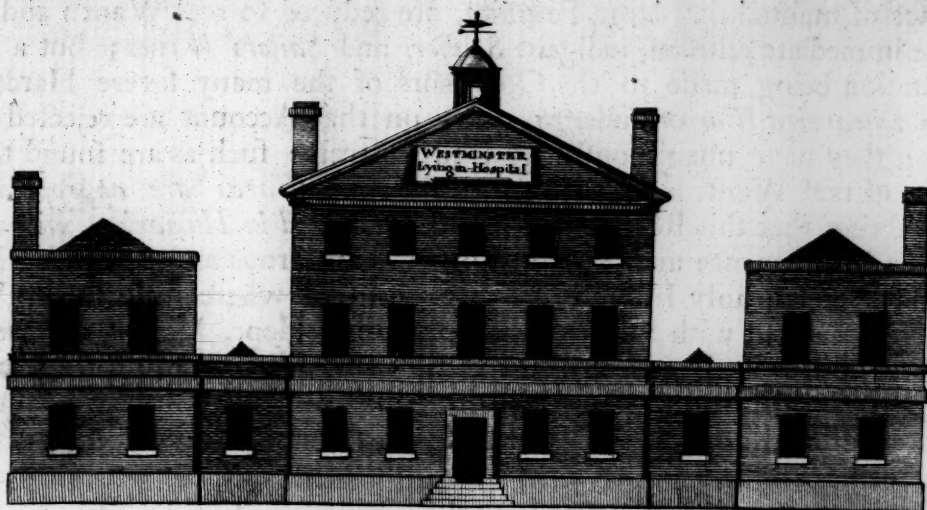
IT is here necessary to say something on the Design of that *Apparatus* intended as an *artificial Substitute* for the real Bodies of *Women and Children*.

In the *Practical Part of Midwifery*, there is a kind of *Dexterity* required, which can never be taught by Description; --- nothing but Practice itself can adapt the hand of the Pupil to the easy and judicious Performance of the several Operations in this Art.

Before any one is admitted to practise on *living Subjects*, he ought first to perform Operations on *artificial Bodies*, so *naturally constructed*, as to correspond with the several Parts concerned in *Parturition*. But as *bad Machines* are so far from being serviceable, that they do much harm, by misinforming the judgment of the Student, and giving him a false idea of Nature, in the *Touch, Figure, and Disposition* of the several Parts; I was induced to bestow no small labor, and expence on that *Apparatus*, upon which I artificially represent the *several Operations of Midwifery*; having for many years been making *Alterations and Improvements* in it, as upon *Trial* I discovered its Defects.

By the Use of this *Apparatus*, each *difficult Case* is reduced to *Demonstration*, which will afford the Student such solid Introductory knowledge as cannot be forgot; --- from thence he will become acquainted with the *Position* most conducive to a speedy delivery, and acquire *Dexterity and Skill* in applying the *different Instruments* used in *difficult Labors*; but particularly, in *preternatural Cases*, where the life of the patient depends upon his dexterity and skill, he will learn the method of *turning the Child* with more ease to himself and safety to the mother, by means of an *artificial Uterus* of a *new Construction*, which contracts progressively and uniformly on the body of the Infant, and acts on the hand of the Operator, with different degrees of force, so as to give him such ideas of real difficulty as present themselves in Nature, and in a Manner not hitherto demonstrated upon any other *Apparatus in Europe*.

* * * Gentlemen who have already attended Lectures, and are desirous of farther practical Improvement will be allowed to attend the Hospital in the first Course.



ACCOUNT of the *Westminster New Lying-in Hospital*,
instituted A. D. 1765, and supported by Volun-
tary Subscription.

The Right Honorable LADY NORTH, Patroness,
Right Honorable LORD GROSVENOR, President.

Duke of Rutland,
Hon. William Hervey,
Hon. Thomas Grosvenor,

} Vice-Presidents.

{ Hon. Charles Fox,
Major General Boyd.
James Scarwen, Esq.

IN the Year 1765, Dr. JOHN LEAKE purchased a Piece of Ground on a Building Lease on the *Surry Side* of *Westminster Bridge*, and afterwards presented to the Public the *Original Plan* for the institution of this Hospital.

Being honored with the patronage of several Gentleman of *Rank* and *Distinction*, and favored by the Assistance of his *Friends* and the Public, which he is desirous most respectfully to acknowledge; he at last had the Satisfaction of seeing this charitable Design carried into Execution, after the repeated Exertion of his utmost Endeavours to that End.

The Institution of this Charity is principally designed for the Relief of those Childbearing Women the Wives of *poor industrious Tradesmen* or *distressed Housekeepers*, who, either from *unavoidable Misfortunes*, or the
Expence

Expenditure of maintaining large Families, are reduced to real Want; and also for the immediate relief of indigent *Soldiers* and *Sailors' Wives*; but a Representation being made to the Governors of the many severe Hardships which *unmarried Women* undergo, who on that Account are rejected elsewhere; they have unanimously resolved to receive such as are found to be Objects of real Want, and for whom particular Wards are appropriated; not doubting that this Resolution, which is founded in Humanity, will meet with the Countenance and Approbation of a generous and discerning Public; many melancholy Instances having occurred where unfortunate Women overwhelmed with Shame, and destitute of Hope, Money, or Friends, have been driven to Despair by such complicated Misery, and were tempted to destroy themselves, or murder their Infants! True Charity admits of Repentance and opens her benevolent Arms to every Species of Wretchedness.

This Hospital from its general Utility, having hitherto met with great Encouragement from the Public; it is hoped, by the Governors, that the Nobility and others, as well as Gentlemen of Rank in the Army and Navy, will follow the laudable Example of those, by whose generous Munificence the Building was raised; being One Hundred Feet in Front, and large enough to contain Seventy Beds.

Dr. LEAKE attends in all Cases of Danger or Difficulty; and will also give Advice every TUESDAY at the said Hospital, to such Out-Patients as present themselves for Relief in the several Diseases incident to Women and Children.

Besides near 5000 Women relieved in this Hospital, many have been delivered at their own Habitations, and others recommended for Advice as Out-Patients, to whom proper Medicines were dispensed, *Gratis*, according to the Exigence of their several Complaints.

Subscriptions are received at Messrs. Drummonds and Co. Bankers, Charing-Cross, and by the Weekly Board every Tuesday at the Hospital, near Westminster-Bridge, where a printed Account of this present State of the Charity may be had at large.

Physicians to the Hospital.	}	Dr. John Leake,
		Dr. James Ford,
		Dr. Richard Huck Saunders,

Mr. Poignand, Surgeon,

Two visiting Apothecaries, and

A Matron.

(2)

S Y L L A B U S
OF THE
L E C T U R E S.

INTRODUCTORY LECTURE.

AN Historical View of the Rise, Progress, and present State of Midwifery; with the Theory and Practice of the ancient Writers.

General Account of the Doctrine, Writings, and Improvements of the most eminent *Modern Professors* of Midwifery; particularly, those who now give public Lectures on that Science in different Parts of Europe.

The Means most conducive to a perfect Knowledge of the Theory and Practice of Midwifery.

Qualification and Deportment of an *Accoucheur*.

T

LECTURE

L E C T U R E II.

Anatomy of the Female Pelvis, with a Description of the Form, Situation and Connexion of the several Bones of which it is made up, viz. Os Sacrum, Coccyx and Offa innominata, with their Ligaments, Cartilages, and surrounding Muscles.

Division of the Offa innominata into their several Bones, viz.

Ilium,
Ischium, &
Pubis.

The Dimensions of a well-formed Pelvis at its Brim and Bottom;—its Extent from Side to Side, and from the posterior to anterior Part; with its posterior, anterior and lateral Depth.

Figure of its Cavity, and the Difference between a well-formed and *distorted Pelvis*; also the Marks which distinguish the *Male* from *Female Pelvis*.

Causes of a distorted or *Narrow Pelvis*, and its dangerous Consequence to Child-bearing Women.

Of the Shape, Structure, and different Diameters of the Foetal Cranium; with the Advantage of knowing the *relative Proportion of the Infant's Head to the Pelvis*, as it passes through its Cavity in different Directions.

Remarks on the Membranous Connexion of the Bones composing the Infant's Skull;—different from the Adult,---and how corresponding with the Intention of Nature in facilitating the Child's Birth.

LECTURE

L E C T U R E III.

Of the Female Organs of Generation, viz.

Externally	{	Pudenda, Meatus Urinarius, Clitoris, & Nymphæ.
Internally	{	Hymen, Vagina, Os internum & Uterus ; Fallopian Tubes, Ovaria and Ligaments.

Contiguous Parts, { Vesica-Urinaria,
Rectum & Perinæum.

Figure of the Uterus in its Virgin State, and after Pregnancy; and of the gradual Distention of the Fundus and Cervix Uteri at different Periods of Gestation.

The several Parts will be shewn in *Situ Naturæ*, with *Physiological Observations* on their Structure and Use.

L E C T U R E IV.

Of the several Diseases incident to the Organs of Generation, and Methods of their Cure, viz.

Prolapsus Vaginæ & Uteri,---their Nature and Treatment.

Of *Pessaries* invented and recommended for the Relief of the above Complaints,---their pernicious Effects.

Stone in the Bladder,---its bad Consequence to Women in Labour.---Painful Symptoms thence arising---how relieved.

Of Ruptures in general, and of a particular Species of Hernia peculiar to Women.

The retroverted Womb,---its Nature and Treatment.

Imperforated Hymen and Operation necessary for its Cure.

L E C T U R E V.

Of the Menstrual Flux.

Various Hypotheses laid down by Physiologists to account for that extraordinary Phenomenon.

Of the Change produced in the female Constitution, at the Age of Puberty.

--- Menfes in their morbid State, viz. when irregular, obstructed, or too large in quantity.

Of the deviating Menfes.

Cessation of the Menfes, and Disorders from thence arising.

L E C T U R E VI.

Of *Chlorosis*, *Hysteric Affections*, and *Furor Uterinus*.

Fluor Albus; --- how distinguished from *Gonorrhæa virulenta*, Menfes decolores, or Discharge of an Ulcer in the Womb; with their several Causes, and *Method of Cure*.

Dropfy of the Ovaria --- its Nature and Event.

Of the cancerous Womb; Schirrous and Cancerous Breast, and Effects of *Cicuta*; *Vegeto mineral Water*, and other Medicines in those Disorders.

Of Sterility or Barrenness, with its several Causes, as relative to both Sexes; and of the Means most conducive to remedy such Defects.

L E C T U R E VII.

Of Generation.

The ancient and modern Doctrine of Conception, and various Opinions advanced by different Authors on that Subject.

Genitura of the Ancients, --- what?

The Oviparous System of *Harvey*, *Malphigius*, and *De Graaf*; --- Animalcular System of *Hammius*, *Leeuwenhoek*, and *Hartfoker*, and corpuscular organical System of *M. Buffon*.

Of the *impregnated Ovum*, and its Descent into the Uterus by the Fallopian Tube; with the progressive Order in which the several Parts of the Embryo unfold themselves in Magnitude, and Figure, from Conception to to the time of Birth.

Viviparous and *Oviparous* animals, --- their Analogy considered in the manner of their Production.

Æquivocal Generation; --- exploded by the Experiments of *Redi*.

Of *Twins*, Surperfoetation, false Conceptions, and Moles.

--- Extra-uterine Fœtuses, and Production of Monsters; with Remarks on the Cases mentioned by *Licetus*, &c.

The Term of Uterine Gestation.

L E C T U R E VIII.

Complaints which follow Conception ;---their various Causes, and palliative Method of Cure.

Signs of Conception,—how distinguished from obstructed Catamenia, the encysted Dropsy, or other equivocal Marks of Pregnancy.

Nausea, Vomiting, and Longing for unnatural Substances.

Of the Hæmorrhoids, Costiveness, Anasarcaous Swelling of the Legs, Cough and Difficulty of Breathing; and also the several Disorders arising from Distention of the Uterus, and Compression of the Viscera, in the last Months of Pregnancy.

Treatment and Cure of the Gonorrhæa Virulenta, and Lues Venerea, during Pregnancy.

Of Abortion from a Fault of the Mother's Constitution;—Diseases of the Fœtus, or preternatural Conformation of the Uterus;—from inordinate Passions of the Mind;---external Violence, or any Cause which occasions a Separation of the Placenta from the Uterus.

Abortion,---most frequent in the three first Months of Gestation;---and why?

Remedies most effectual in preventing or relieving the Symptoms of Abortion.

Obstruction of Urine, at the latter End of Pregnancy.

Rules and Cautions for the Conduct, and Regimen of Women during the several periods of Pregnancy.

LECTURE

L E C T U R E IX.

Of the Fœtus.

Situation of the Fœtus in Utero, and Parts peculiar to it, viz.

Placenta and its Membranes; and of the Quantity, Quality and Use of the *Liquor Amnii*, or contained Waters.

Funis Umbilicalis or Navel-String, — Course of its Vessels traced to their Origin, with their several Connexions and Dependencies respecting the Mother and Child.

Nutrition and *Circulation* of Blood in the Fœtus; and of the *Foramen Ovale*, *Canalis arteriosus* and *Ductus Venosus*.

Of the *Allantois* and *Urachus*.

Difference between the Fœtus and Adult, and of the Change produced in the first, by the Effect of *Respiration*.

Most effectual Means of recovering Children, born *apparently dead*.

Experiment to discover, whether the Infant was *still-born* or destroyed after the Birth; with necessary Cautions in Reports to *Juries*, or in Cases of Evidence against the accused.

* * * The several Parts peculiar to the Fœtus, will be demonstrated by *Anatomical Preparations*.

L E C T U R E X.

Signs which precede or accompany true Labour.

Of the Nature, Cause and Effects of *Labour Pains*, and expulsive Force of the Uterus in its gravid State.

Method

Method of Touching in the first Months of Pregnancy, and at the time of Labour, with the Information thence arising, viz. Whether the Woman is with Child or not; and whether in danger of Miscarriage; also what Changes of the Os Uteri indicate Labour, and distinguish *true Pains* from those which are *spurious*;---how to promote the one and relieve the other.

The great Advantage of being thoroughly conversant in the *Art of Touching*, and truly distinguishing the presenting Parts; with Cautions and Remarks in doubtful Cases.

Gradual Dilatation of the Os Uteri, by the Protruded Membranes, or Pressure of the Child's Head.

Too early Rupture of the Membranes and Discharge of the Waters.

Preternatural Strength or Rigidity of the Membranes, and how the Progress of Labour may be retarded in such Cases; with the Methods to remedy these Inconveniencies.

Signs of a *dead Child*.

The bad Consequence of hastening Labour unseasonably in natural Cases, and Danger of Delays, or of giving *stimulating Medicines*, where the Child presents in a wrong Position.

L E C T U R E XI.

Division of Labours, viz. *Natural*, *Difficult*, and *Preternatural*.

Position of the Patient most conducive to a speedy Delivery, in the several Kinds of Labour; and the Methods practised in different Countries on that Occasion.

* * A natural Labour artificially represented on the *Apparatus*, (*in a Manner not hitherto effected*) distinctly shewing the gradual Dilatation of the

the Os Uteri and Protrusion of the *Membranes*, with their alternate *Distention* and *Relaxation*, as the Pains come on, and go off.

Rupture of the Membranes and Evacuation of the Waters exactly imitated.

+++ An *artificial Demonstration* of the Womb's *progressive Contraction* as the Child advances in the Birth.

Manner how the Child's Head presents to the Birth in natural Cases,---the turns it makes in passing through the Pelvis; and likewise of *guarding the Perinæum* from Laceration.

Ould's Observations, respecting the Position of the Head, in natural Cases.

Force of Pressure on the Infant's Head exemplified by an *artificial Fœtus*, so constructed as to allow of the same Motion in the Bones of the Cranium as that of the real Child.

Of Tying and Cutting the Funis, and *extracting the Placenta*; with Remarks on the Conduct of Animals in the Division of the Funis; and likewise on the *Orbicularis Muscle* in Fundo Uteri, as described by *Ruyseh*.

Of the *Placenta* presenting loose, or adhering to the Os Uteri,---the Cause of Uterine Hæmorrhage.---How to act in such Cases for the Preservation of the Mother.

The Method of discovering, whether there is a second Child or not.

L E C T U R E XII.

Of *Difficult Labors*, where extraordinary Assistance is required.

The various Causes of difficult or laborious Cases; particularly, Weakness of the Patient and Absence of her Pains;---Anxiety of Mind, Floodings, or other profuse Evacuations;---A narrow or distorted Pelvis,---Rigidity or preternatural Constriction of the Passages,---Induration of the Os Uteri, or wrong Position of the Child's Head; its being too large, over ossified, or dropfical.

General Rules how to assist in the various kinds of Laborious Cases.

Daventer's Sentiments on *Obliquities* of the Womb considered, and refuted.

Method of Practice when the Birth is retarded by twisting of the Funis round the Child's Neck.

The Use and Abuse of *Instruments*; with a comparative View of their Advantages and Defects, resulting from their Mechanical Structure, Action and Manner of Application.

Of *Palfyn's* and *Levret's* long Forceps, and also of those recommended by *Smellie*, &c.

The Vectis or Lever invented and used by *Roonhuijse*.—Its Use.

††† Description and Use of the Author's NEW FORCEPS, with *three Blades*, in which the mechanical Powers of the *Forceps* and *Lever* are combined, and their Utility demonstrated and confirmed by the concurring Testimonies of FOREIGN PROFESSORS, in Letters to the Author.

L E C T U R E XIII.

Of the Vertex	} presenting.
----- Fontanelle	
----- Face	
----- Ear	

+++ A difficult Labor represented, by an *Artificial Woman and Child*, shewing the Method of applying the Forceps, and other Instruments, in the several Positions of the Child's Head.

Levret's Method of Practice when the *Face is to the Pubes*.

Methods of discovering the Narrowness of the Pelvis, and position, or extraordinary Bulk of the Child's Head.

Practical Rules and Cautions in the Application of the Forceps, and Extraction of the Head.

Cases where the Forceps cannot be successfully applied, altho' the Head presents.

Of the *particular Cases which require Instruments*, and the time their Application becomes absolutely necessary for the Preservation of the Mother.

Symptoms denoting immediate Danger.

Crotchets and Perforators, --- in what Cases their Application condemned by *Crantz* of Vienna. *Rædererus*, Professor of Midwifery at Gottingen, --- censured by the above author for inculcating their frequent Use.

Of the *Terebra Occulta*, Long Scissars and Scalpel Ring; with the Manner of opening the Child's Head, when too large to pass, and the Life of the Mother is in Danger; --- how to extract it safely by the Forceps, Crotchet or Tire-Tête of *Mauriceau*.

L E C T U R E XIV.

Of *preternatural Labors*, where the Child is to be turned and brought by the Feet.

Method of turning the Child.

Mechanical Knowledge applied to the Operation of Turning the Child,---how useful.

The dangerous Consequence of too much Violence or injudicious Assistance in the above Cases.

Ruptured Womb,---fatal to the Patient.

Practical Rules and Cautions in the various kinds of preternatural Cases.

Remarks on the Insufficiency, and Impropriety of a *Glass Uterus*, in demonstrating the Manner of turning the Child, in Twin Cases or otherwise.

††† The several Kinds of *preternatural Labors* will be artificially represented on Machinery, according to the most approved modern Practice.

L E C T U R E XV.

The Method of delivering when the Feet, Knees or Breech present.

How to assist where the Child presents with the Breech, and cannot safely be turned and brought by the Feet.

Practical Rules to be observed in the above Case.

Of the Blunt Hook and its Application.

††† A Breech-case artificially represented.

Of the Child lying across the *Uterus*, and presenting with its Back, Belly, or Sides,—the assistance necessary on such Occasions.

L E C T U R E XVI.

Of the *Funis Umbilicalis* presenting before the Child's Head, and Danger of its Compression in the Passage.

+++ The Method of delivering where the Arm or Shoulder present, artificially demonstrated by the *Apparatus*: on which is also represented the *contractive force of the Uterus* on the Body of the Infant.

Transverse Position of the Arms between the Hind-head and Pubes, where the Child is brought Footling.

Of the safest and most expeditious Methods of *extracting the Head* when detained by the Narrowness of the Pelvis; and the Danger of Delays or too much Violence on that Occasion.

The Manner of extracting the Child's Head when separated from the Body and left in Utero; with the Use of *Amand's Net*, *Terebra Occulta*, *Tire-Tête* or Forceps.

L E C T U R E XVII.

Of the Delivery of *Twins* or Plurality of Children, and the Extraction of their *Placentæ*; with Remarks on cutting and tying the *Funis* of the first-born Infant.

The *Birth of Monsters*, and Extraction of false Conceptions, Moles or Polypose Tumors of the Uterus.

Observations on the *Section of the Symphysis Pubis*, successfully performed at Paris by *Sigault*, and recommended by *M. Le Roy*, as a Substitute for the *Cæsarian Operation*.

Of the *Cæsarian Operation*; with Remarks on the Cases mentioned by *Rossetus* and others.

L E C T U R E XVIII.

Of *Uterine Hæmorrhages, Convulsions, and acute Fevers* in the State of Pregnancy.

Of *Floodings* before Delivery, from external Violence,---Fevers,---Passions of the Mind, or any Cause which will preternaturally encrease the Momentum of the Blood.

Floodings after Delivery---from violent Extraction of the Placenta, Distention of the Womb by a second Child, or Want of its due Contraction, from general Weakness of the Solids.

Convulsions ;---their various Causes and Medical Treatment.

Practical Commentaries on such of the Aphorisms of *Hippocrates, Mauriceau, &c.* as relate to the Diseases most fatal to Women.

L E C T U R E XIX.

Treatment of Women after Delivery ;---the Regimen then necessary, and Means most conducive to their Recovery.

Of the Maladies sometimes consequent of Delivery, viz. After-pains, Inflammation, Contusion, or Rupture of the Uterus.

Laceration of the Bladder, or Perinæum ;---and of the Applications necessary in the Intention of Cure.

Obstruction, or Incontinence of Urine, and *Method of passing the Catheter.*

Inversion of the Womb, and Prolapsion of the Rectum.—their Cause and Cure.

Of the Lochia, when obstructed, or redundant in Quantity ; and Effects of *Opiates* or other Medicines in the above Cases.

General Observations on the Nature and Treatment of *obstructed Lochia.*

L E C T U R E XX.

* * Animadversions on the Nature and Cause of the acute, epidemical Fever, peculiar to Women after Delivery, commonly called the *Child-bed Fever*; --- with *Clinical Observations and Remarks* towards the most effectual Methods of its cure.

Of the Milk Fever, and Inflammation or Abscess of the Breasts.

Topical Applications for repelling the Milk --- pernicious, and why.

Miliary Eruption, Diarrhæa, or other Evacuations supervening the Milk Fever or Obstruction of the Lochia.

Colostrum or first Milk; its Qualities and Effects on the sucking Infant.

Of the Nature and Secretion of the Milk;—how rendered medicinal to the Infant.

Evacuations necessary at the End of the Month.

L E C T U R E XXI.

The Treatment and Regimen of new-born Infants.

Disorders in general attending the *first State of Infancy*, and the most approved Methods of their Cure.

Of Fractures and Dislocations, and a Species of *Hydrocele* peculiar to new-born Infants.

Of the	{	Mould-shot Head,	
		Hydrocephalus, and	
		Spina Bifida.	
		Hare Lip, ---	
		Confinement of the Tongue, or	
		{	Obstruction of the natural Passages.

Of

Of { Hernia Congenita
 { Icterus Infantum,
 { Dentition, and
 { Dysentery.

Of { Tinea,
 { Aphthæ, and
 { Crusta Lactea.

L E C T U R E

Acute and chronic Diseases, in general, in
fancy; --- their Pathology and Method of Cure.

Of { Small-pox, and the Artificial Method
 { by Inoculation.
 { Measles,
 { Tussis Convulsiva, and
 { Epilepsia Infantum.

Of { Rickets,
 { Atrophia, and
 { Disorders arising from Worms.
 { Scrophula.
 { Lues Venerea, and hereditary Diseases.

Practical Cautions respecting the the indi-
ters, and *Opiates*, in Diseases of Children.

Directions for the Choice of a *Wet-Nurse*
 from her Habit of Body and Quality of M-
 lation of her Diet in Disorders incident to

T H E E N D

U R E XXII.

general, incident to the *second State of In-*
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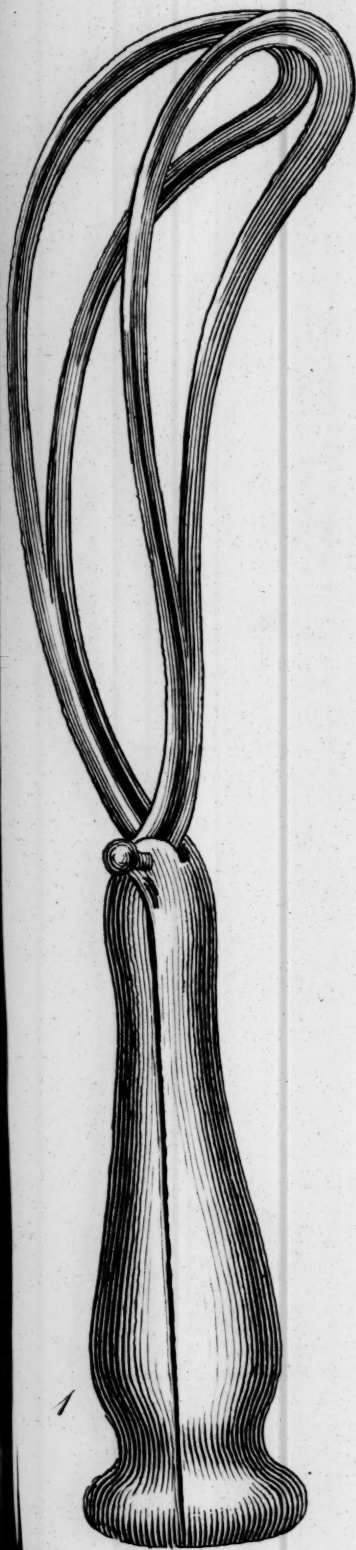
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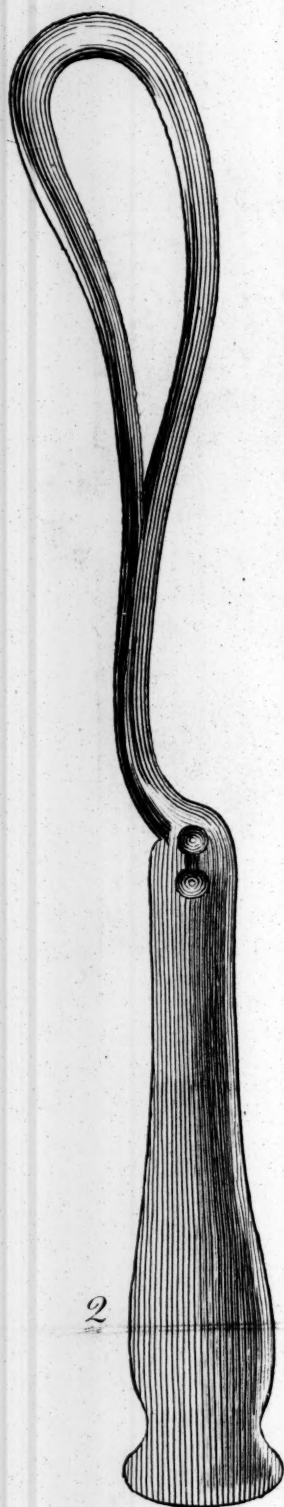
a *Wet-Nurse* --- Indications to be taken
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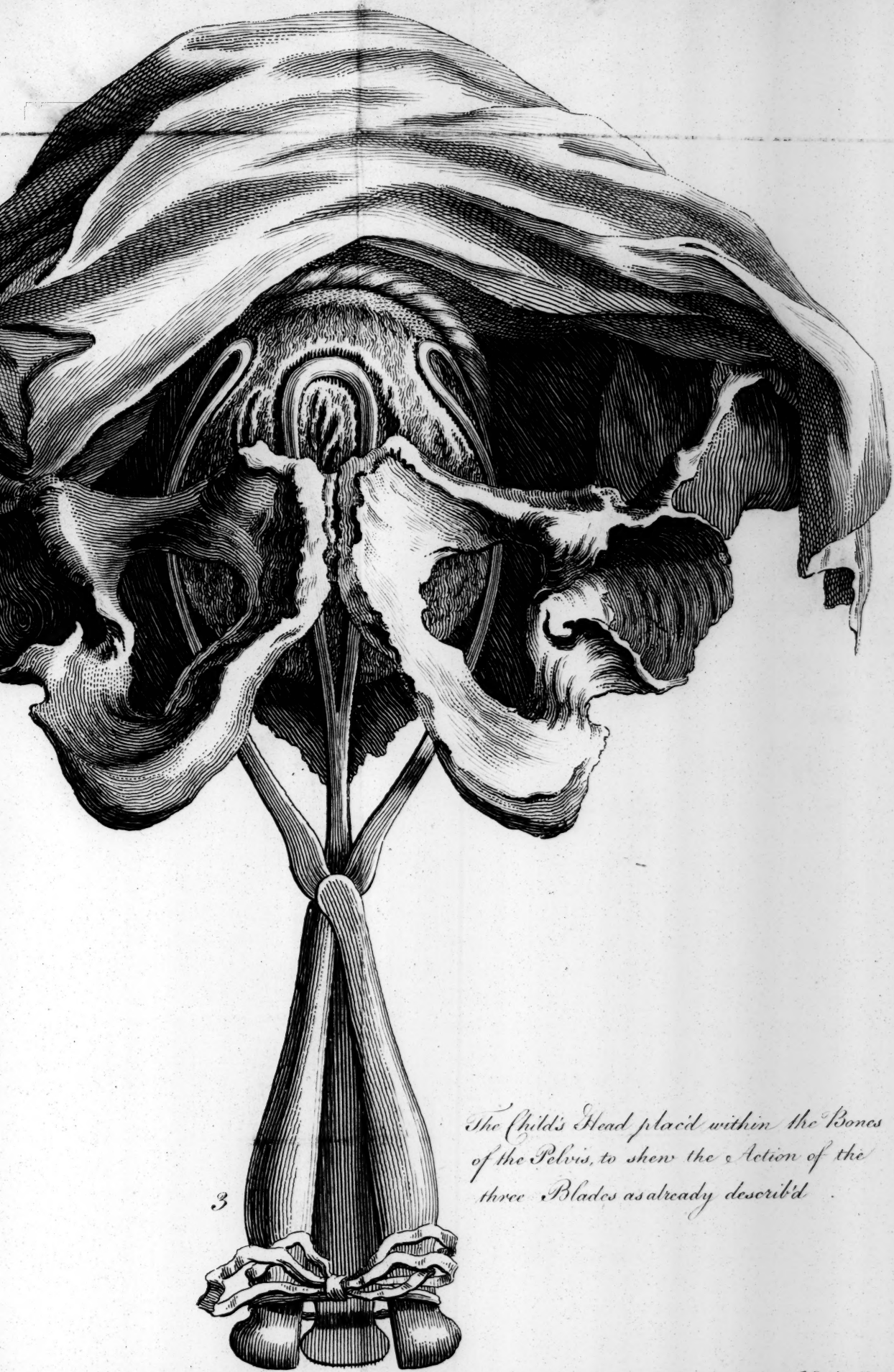
*The Blades of the
Forceps join'd*

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*The Lever or
third Blade*





*The Child's Head plac'd within the Bones
of the Pelvis, to shew the Action of the
three Blades as already describ'd .*



DESCRIPTION and USE

OF THE

NEW FORCEPS

WITH THREE BLADES.

THE *Forceps* used in MIDWIFERY may be considered as an Instrument consisting of two Levers, which act in contrary Directions from one common Centre or Fulcrum, where their Blades unite, and are sustained by each other; consequently, their Power on the Body to be moved will be in Proportion to the Length of their Levers or Handles.

H. Crantz, Professor of Midwifery at Vienna, and Leuret of Paris, both observe, that when the Child's Head is wedged within the Bones of the Pelvis, (*capite incuneato*) it can scarcely ever be extracted by the *common Forceps* recommended by Smellie, because of their Shortness; and as their Blades are *only curved in one Direction*, whenever it happens that the Hind-head is forced over the *Symphysis Pubis*, it cannot then be got hold of within the Curve of their Blades, which being only applied along the Ears in a straight Direction, are therefore apt to slip downwards over the Face, and foil the Operator in extracting the Head: This will the rather happen, because they are made *taper towards the Points*, which will diminish their Surface of Contact on the Head, and prevent them from taking a firm Hold; — *so that they are least serviceable in those very Cases where they are most wanted*, — that is, where the Pelvis is narrow; for it must be allowed, of all Difficulties, that which happens from the above Cause, is by far the most insurmountable Obstacle to the Child's Birth, since it can only be overcome by very strong Pains, which compress the Head, and force it to conform to the bony Passage.

The *short Forceps* may indeed be effectually applied when the Child's Head is low in the Pelvis; but where that is the Case, artificial Assistance is seldom necessary, the *principal Difficulty being then over*; because the Head is now descended through a narrow, indilatable, bony Passage, the *Brim of the Pelvis*, into a wider Cavity which is dilatable, namely, the inferior Segment of the Pelvis. But should any Difficulty still remain, it will now be removed by the Concurrence of two Causes; viz. the inferior Parts of the Pelvis will gradually dilate and give Way to the Pressure of the Head, which at the same Time, will be squeezed into a longitudinal Form, and therefore its transverse Diameter, in respect to the Passage, will

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become.

become considerably less; both which Circumstances have a manifest Tendency to facilitate the Birth.

I know that the Application of Forceps is objected to by some, till after the Head has got below the Brim of the Pelvis, on the Supposition that the Force applied to bring it down, would prove injurious to the Mother. — But the *violent and long continued Compression of the soft Parts*, viz. the *Vagina and Neck of the Bladder*, &c. when squeezed between the Head and Bones of the Pelvis, will be much more liable to endanger the Patient. — Since Instances may be found where a *Mortification* of those Parts was the Consequence, and where the Child by the Force of extreme Pressure was also *born dead*; of two Evils, therefore, the least is to be chosen.

I would ask such, what they would do, *when the Head is wedged within the bony Passage, and will not advance by the strongest Pains?* Consequently, where the Patient is in danger of *dying undelivered*, especially if other dangerous Symptoms occur; as *intermitting Pulse, coldness of the Extremities, Faintings, &c.*

Under such pressing Circumstances, they must either *open the Head of a living Child*; — *use the long, double curved Forceps*, or *suffer the Patient to die undelivered*: we have already seen that Delivery in such Cases cannot be effected by the *short Forceps*, and to open the Head of a living Infant, before every other Expedient had been tried in vain, would surely be deemed *rash and unnatural Practice!*

In Cases, therefore, extremely laborious, when the *Head is large*, — the *Pelvis narrow*, or both; — where the Patient's Strength is exhausted by *Uterine Hemorrhage*, — where she is suddenly attacked with *Convulsions, Faintings*, or other alarming Symptoms, and consequently, where the *labor Pains would be insufficient* to bring forth the Child; the *long, double curved Forceps*, hereafter described, may be used with great Safety and Advantage, either *with or without the Lever or third Blade*, as Occasion may require.

When the Fore-head presents to the Os Sacrum, and Hind-head to the Pubes, the long Axis of the Head intersects the short Axis of the Pelvis, and therefore, these Parts may be considered as *two Ellipses or Ovals* crossing each other; — a Position of the Head very unfavorable to the Child's Birth. Here the Blades of the Forceps are to be applied along the Ears, and we are directed to turn the Face to one Side, so that there may be a *perfect Coincidence* between the Shape of the Head and Cavity of the Pelvis: but this cannot always be done without much Violence; besides, when it is wedged within the Brim, we cannot always be certain of its exact Position, and therefore, should it happen to be turned the wrong Way, the Difficulty will be increased; consequently, there will often be a *Necessity of bringing it along as it first presented*. — Whenever this is the Case, a very capital Inconvenience,

in every kind of Forceps, will occur; for when they are thus applied on the Sides of the Head, the more it is there compressed by the Action of the Blades, the more will the *Hind-head be forced over the Pubes*, and the *Fore-head against the Sacrum*, which will still add to the Difficulty, and consequently it cannot be extracted in this Manner, without great Violence both to the Mother and Child:—This Circumstance has happened to me in Practice several Times, particularly in two laborious Cases, where the repeated Application of the Blades at the Sides of the Head *proved ineffectual*; and dangerous Symptoms appearing, I was afraid of farther Delay, and therefore, introduced them at the Sacrum and Pubes, that is, on the *Face and Occiput*, and *extracted the Head with Ease at the first Effort*; the Patient, during the Operation, being placed on her Side.

As this Success was plainly owing to the Compression of the longest Axis of the Head, it first suggested to me the Hint of applying *Forceps with three Blades*, one of which may be occasionally used as a *Lever*, which will act on the same Principle as that of *Roonbuijs*, by Means of which, he is said to have practised with so much Reputation and Success in Holland, that *De Vscher* and *Van de Paol*, (two Physicians of Amsterdam) purchased it as Secret, for a considerable Sum of Money, and afterwards published it for the Good of Mankind:—'Tis only a *simple Lever*, made of tempered Steel, which, in laborious Cases, is directed to be passed up between the Pubes and Hind-head, in order to bring down the last below the *Symphysis Pubis*.—this it will often effectually do, but notwithstanding its seeming Simplicity, its use may be attended with the utmost Danger; for as the Symphysis of the Pubes is the Centre from which it acts, and the resting point upon which the whole Stress is laid; whenever much Force is applied to bring down the Head, (Action and Reaction being the same) the *Vagina*, *Neck of the Bladder*, and *nervous Parts*, may be so violently bruised, as to occasion *Mortification*, or even the very Symphysis of the Pubes might happen to give way.

To remedy this Inconvenience, which is the principal Objection to the *Lever*, I have, for some Years past, in my LECTURES on Midwifery, recommended an *Instrument consisting of three Blades*, being, in Fact a Pair of *long Forceps with a double Curve*, and the Addition of a *Lever*, which may be applied without the least Danger of hurting the Mother; for here the *Fulcrum* of the *Lever* is *removed from the Pubes to the junction of the two Blades*, which not only may be made to act as a Pair of Forceps, but at the same time afford a *firm resting Point* for the third Blade, by Means of a small Pivot, or *central Pin*, placed at the under Side of the lower Blade.

After the Introduction of the Blades of these Forceps at the Sides of the Child's Head, this *Lever* is to be passed up between the Occiput and Pubes; and as
the

the Pelvis there forms an Arch, and is also *extremely shallow*; by inclining the Handle towards the Perinæum, it may be introduced without the least Degree of Violence or Difficulty.

This *additional Blade or Lever* applied immediately to the resisting Point or *Occiput*, where it rests at the Pubes, will not only effectually shorten the Head, and detach it from the place of its Obstruction, but will also *prevent the Forceps from slipping*; for if they tend down towards the Face, the *Lever*, which is fixed at the Hind-head, and sustained at the Junction of the Blades, must be drawn down with them, and consequently the Head also will still be more brought into the Center of the Pelvis, and more easily extracted; which may be better understood by referring to the *third Figure in the Copper Plate*.

The Blades of these Forceps are broad at their Extremities where they grasp the Head, and being *reflected towards the Pubes with a curvilinear Sweep*, they not only correspond more aptly with the Direction of Passage than the common short ones; but also take a much *more firm and extensive Hold of the Hind-head*, where it rests at the Brim: Besides, as their compressive Force on the Head is more uniform, there will be less Danger of lacerating the Perinæum: They will also be less liable to hurt the Patient, for, they lock at a greater Distance from the Os Externum; neither will they keep this Part so violently on the Stretch; for their Blades near the Junction, are much closer together than in the common Forceps;—the Distance in the first being only two Inches from Blade to Blade, but in the last, three Inches and a Quarter.

The Curve of the Blades from their Junction to their Extremities is in Length *seven Inches and an Half*, and from thence to Extremities of the Handles, *five Inches and an Half*, in the Whole *thirteen Inches*; so that independent of the Lever, and admitting they are used alone, considering *their Length and the Effect of their double Curve*, they will in all Cases be found preferable to the common *short Forceps*, with a *single Curve*. But notwithstanding the prevalence of Novelty in most Matters; *new Truths are sometimes hardly sufficient to combat our old Errors*; so difficult is it to divest the Mind of Habit and early Prejudice. That the Ignorant should not be able to comprehend is not more to be wondered at, than that the Blind should mistake his Way; but there is less Excuse for those who pretend to Candor and Discernment, yet obstinately shut their Eyes on Conviction.

The Lever is about twelve Inches and an half in length, and in its outside Centre, which should be made with a PROJECTING ANGLE, to give it greater power of action, are placed two small depressions, for the reception of the *Pivot* on the lower blade with a superficial Groove between these depressions, so as to allow it to be passed higher or lower as occasion may require.

In

In short, *these two mechanical Powers of the Forceps and Lever thus combined, will mutually assist each other*;—For the Lever will not only prevent the Forceps from slipping, but will also shorten the Head, and bring it down below the Arch of the Pubes into the Centre of the Pelvis, by which Means it may be more easily extracted. On the other Hand, the Forceps will afford a resting Point to the Lever, from which it may effectually act *without any Sort of Injury to the Patient*, so that we have the Advantages of both Instruments without the Defects of either.

To those who have seen the *Instrument*, and Manner of its Application, this Description would perhaps have been sufficiently plain and obvious; but lest it should be imperfectly understood by others, I have added *two Copper-plate Prints* to represent it more clearly, being desirous of making it useful to the utmost of my Power.

P O S T S C R I P T.

Several of these Forceps having been made in a bungling, immechanical manner, and very unlike the original Pair, from whence the annexed Print is taken; Gentlemen of the Profession are requested to direct the Instrument-maker to be particularly careful on that Account, and order them to be made of tempered Steel instead of Iron case-hardened, which will always bend and defeat the Purpose of their Application.—The Lever should be made more streight, and its Angle, where the two Holes are, should be more projecting; these Holes are also too deep, and the Pivot at the Junction of the Blades is generally too short, so as to prevent the Lever from having sufficient Power of Action.

The Blades of the Forceps have hitherto been made too short and slender; they have also wanted more breadth at their Points, and Depth in the Curve where they should grasp the Head. The Blades, when locked, should almost touch at their Points, and only be covered with Leather high as the Fork.

London,
Craven-street, Strand.
September, 2d, 1782.

EXTRACT of a LETTER from Monsf. D. H. Galland, to Dr. Leake, relative to his New Forceps.

Monsieur

Monsieur JOHN LEAKE, Membre du Collège Royal des Medecins de Londres, &c. à Londres.

JE me flatte que vous excuserez l'importunité d'une personne qui, ainsi que vous Monsieur, consacre son tems et ses forces à l'exercice de fonctions dans lesquelles il ne s'agit pas moins que de veiller à la conversation de nos semblables. Oui, Monsieur, j'ose m'assurer que vous ne prendrez pas mon hardiesse de mauvaise part, puisque c'est la reputation distinguée dont vous jouissez à si just titre qui y donne occasion. Voici de quoi il s'agit : j'ai lu avec un singulier plaisir le discours préliminaire que vous avez prononcé le 4 d'Octobre dernier, à l'ouverture de votre Cours d'Accouchemens, à la fin du quel j'ai vu avec la plus grande satisfaction la description & la figure d'un nouveau Forceps à trois branches, de votre invention ; et comme il me paroît que cette troisième branche peut être fort utile dans certain cas, j'ai d'abord pris la resolution de me procurer cet Instrument, tant pour en faire l'essai que pour le montrer dans mes cours publics : mais attendu l'ignorance de nos couteliers, et la difficulté qu'il y a pour leur faire suivre exactement le dessein, j'ai cru que le plus court et le plus sur seroit de m'adresser directement à l'Auteur. Je vous prie donc, Monsieur, d'avoir la bonté de faire faire le dit Forceps selon la description que vous en avez donnée, & de me le faire parvenir par celui qui aura l'honneur de vous remettre cette lettre & qui aura soin de payer l'instrument. Vous m'obligerez infiniment et vous me rendrez un service qui méritera toute ma reconnaissance.

Je vous prie d'agréer mes offres de service dans ce pays ci où je vou drois être en état de vous prouver les sentimens de la parfaite estime et de la considération distinguée avec laquelle j'ai l'honneur d'être.

M O N S I E U R,

Votre très humble & très obeissant Serviteur,

DAVID HENRY GALLANDAT,

*Flessingue en Zélande
ce 10 Août 1774.*

*Membre de l' acad. imp. des curieux de la nature,
trésorier de la société Zelandoise des sciences ;
demonstrateur d'anatomie, de chirurgie, & de
l'art de accouchemens, à Flessingue.*

C'est mon adresse, en cas que vous ayez la bonté de m'honorer d'une réponse, ce qui me feroit un sensible plaisir.

S I R,

Flushing in Zealand, August 10, 1774.

I FLATTER myself you will excuse the importunity of a person who, like yourself, Sir, devotes both his time and abilities to the exercise of duties, the object of which is of no less importance than the preservation of our fellow creatures. Yes, Sir, I dare say you will not be offended at the liberty I have taken, since the distinguished reputation you so deservedly enjoy has been the occasion of it. Here follows the matter in question. I have read with singular pleasure the introductory Lecture which you gave on the 4th of October last, at the opening of your Course of Midwifery; annexed to it I have seen, with the greatest satisfaction, the figure and description of a *new Pair of Forceps with three Blades*, of your invention; and as it appears to me, that that third Blade may be very useful in particular

ticular Cases, I was directly determined to get that Instrument, with Intention both to make trials of it, and to shew it at my public Lectures; but owing to the Ignorance of our Cutlers and the Difficulty there is to make them take an exact Copy of the Model, I thought it the shortest and best Way to apply directly to the Inventor. I shall, then, be much obliged to you, Sir, if you will be so good to get me a Pair made according to the Description you have given of them, and send them me by the Person who will have the Honor to present you this Letter, and pay for the Instrument. In doing this, you will render me a Service which will put me under an infinite Obligation.

Accept, I beg, my Offers of Service in this Country, where I should be very happy to have it in my power to shew you the Sense of that perfect Esteem and distinguished Consideration with which I have the Honor to be,

S I R,

Your most humble and most obedient Servant,

D. H. GALLANDAT,

Member of the Imperial Academy of natural Philosophy, and Treasurer of the Zealand Society of Sciences; Demonstrator of Anatomy, Surgery, and Midwifery.

I was

*I was honoured with the following Letter in the English Language,
from M. Chauffier, Surgeon, at Dyon in France.*

DEAR SIR,

Dyon, Burgundy, Jan. 11, 1776.

WITH great Pleasure I received your very obliging Letter, and to you my true thanks are due.

By Means of our French Ambassador I send you my Friend's Book on *Uterine Hæmorrhages*: The Author, at page 171, has mentioned the Translation of your excellent Work, and exactly repeated your own Words on *Ligatures*, and *astringent Medicines*, and also at page 181, where he laments that your ingenious Observations were not sooner known.

At present, I prepare my Translation to be printed speedily, but should be glad to know, whether there is a *new* and enlarged Edition of your Book, as I see indicated by the English Catalogue.

I have also the Description and Use of your *new Forceps*, which I purpose to add to your *Practical Observations*.

My Friend, *Mr. Leroux*, presents to you his Salutation, and shall be happy to find his Book worthy of your Approbation. — If I can render you Services in this Kingdom, I beg you to command me, and allow the high Respect with which I am

DEAR SIR,

Your most obliged and obedient Servant,

F: CHAUSSIER.

Extracts of Letters from C. M. THODE, Esq. Surgeon to the Empress of Russia, and Councillor at the Court of Petersburg, to Dr. Leake, on the Subject of the New Forceps, translated from the German Originals in his Possession.

S I R,

Petersburg, May 6, 1776.

THE Esteem I have always entertained for your Person and Abilities, and the Gratitude I owe you, require, before every thing, that I return you my humble and sincere Thanks for all the Favors received of you, during my Stay in *London*, when I had the Pleasure of attending your *public Lectures*, as well as of frequenting the *Westminster Lying-in Hospital*, under your Direction; and also for the Honor you have done me since my Absence, by sending me your *New invented Forceps with three Blades*.

I must confess, Sir, when first you shewed me the Model of these *Forceps*, the Invention appeared more curious than materially useful: I considered it as a complex Instrument, the Application of which, for that Reason, might be liable to Difficulties.

These were my Sentiments when I received this Instrument, and until I experienced it's Utility, in two Cases, where, I am sure, without the Assistance of the *third Blade*, it would have been impossible for me to deliver the Mother.

In the first Case, the Patient was a healthy, strong young Woman, who on former Occasions, had easy Labours; yet, here it so happened, that after the Discharge of the Waters, the Child's Head remained firmly wedged within the Pelvis. In this Situation the Woman had been in strong Labour during three Days; and when I was called, on Enquiry, I found her Pains ceased for near twenty-four Hours: She was extremely weak and exhausted. It was not without great trouble I discovered that the
back

back part of the Head had been forced over the *Os Pubis*. All my Endeavours to bring it into a more favourable Position proved ineffectual; the *Use of Smellie's Forceps also proved unsuccessful.*

Here, Sir, for the first Time, I experienced the great Excellence of your *New Forceps*, and that nothing could equal the Utility of their *third Blade*, or Lever.

In the second Case, the Axis of the Head was in a similar Situation, only with this Difference, that the Fore-Head was forced over the Bones of the Pubes. In the first Case, by Means of your Forceps, *I was enabled to save the Mother*, and in the second, *both the Mother and Child*; for which Reason I cannot help being very much pleased with your Invention.

Knowing, Sir, your Candor and Indulgence I flatter myself with Hopes, that you will not take amiss what I have here mentioned, regarding the Prejudices I at first conceived of your New Instrument, since I now willingly confess I was then very much mistaken. This is often the Case, when we trust to Opinion only.

Prompted by Humanity, you have, by Means of this *New Instrument*, endeavoured to save the Life of the Child, where others have not scrupled to destroy it, as a Thing unavoidably necessary. How beneficial would it be to Society, if every one would follow your Example; and if *Prejudice*, *Ignorance*, and *Vanity* would no longer hinder some Men of the Profession from examining with Impartiality and Attention whatever is *new and useful?*

But what do you think of those who endeavour to persuade the Public of their Abilities to deliver Women in all Cases of Midwifery, without the Assistance of any Instrument whatsoever? Not to mention several particular Cases where all Authors agree, that Instruments are indispensably necessary; I am of Opinion, that even the most natural Case, under certain Circumstances, as *Floodings*, &c. may require their Use; particularly the *Forceps*. Of this I am fully convinced, by a Case which lately occurred to me: It was in a strong young Woman, with a well formed Pelvis, in her first Lying-in. The Patient's Strength was so totally exhausted, by
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being

being put too early upon Labour by an ignorant Midwife, that although the Child's Head was considerably advanced, the Pains were insufficient to terminate the Labour. I found the Patient motionless, and almost dead, her Extremities being cold, even near her Body, with hardly any Pulse or Respiration. I was under the Necessity of using the Forceps; but notwithstanding I delivered the Patient in a few Minutes, she died soon after.

Is not this a Proof that even the most natural Cases, where the Strength is exhausted, sometimes require Instruments; and if so, how much more requisite will be their Use in deformed Persons, where there must be still greater Difficulty?

I cannot conclude without sending you a very particular Case, which I believe deserves Attention, as I do not remember any Author who has mentioned that Operation which I practised with Success.

By the Case I here inclose, together with *three accurate Drawings*, of which, Sir, I beg your Acceptance, you will perceive that the Head of a big Child was torn from the Body, and left behind in a narrow and distorted Pelvis: Two skilful Accoucheurs had already laboured in Vain for several Hours to extract it.

When I was called for Assistance, the *Cæsarian Operation* was proposed; but, by a successful Attempt with an Instrument, in the Manner mentioned in the Case, and the *Figure of which I here send you*, I brought the Head away, and delivered the Patient in a few Minutes.

I should be extremely glad to be favoured with your Opinion of the different Cases I have here inclosed, and am, with great Esteem,

S I R,

Your most obedient Servant,

C. M. THODE.

S I R,

Holland, Hague, Nov. 12, 1776.

S I R

I Do not doubt but you will be much surprized to hear I am so near, and that in a few Weeks I hope to have the Pleasure of seeing you in *London*. At *Leiden* I had the Satisfaction of being in Company with *Dr. Brand*, a very able and experienced *Accoucheur*, much esteemed by all the Professors of that University. Among other Things, your *New invented Forceps* became the Subject of Conversation, He told me he had not yet seen that Instrument, but had heard much of it, and that several Cases had occurred to him, where he had been obliged to use a third Blade taken from another Instrument, in the Manner of your *Lever*, and that he particularly remembered, *two Instances* where he had been successful and was able to accomplish what, without such a *third Blade* would have been utterly impossible.

In one of these Cases, indeed, he caused a depression of the Bones of the Head, which notwithstanding all his Endeavours, he could not raise, but which, in a few Days, disappeared of itself and the Child was then alive and well.

He wishes to have a Pair of your *New Forceps*, and much approves your Invention of adding a *third Blade*. I hope to find you well on my Arrival in *London*, and remain, with the utmost Respect,

S I R,

Your most humble Servant,

C. M. THEODE.

+++ *Dr. Leake is informed by Dr. Wedenberg of Stockholm, that the Description of his New Forceps is translated by Dr. Kronits, Physician at Berlin.*

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DEAR

DEAR SIR,

Thetford, Norfolk, August 7, 1781.

I FLATTER myself, the following Case will afford you some Pleasure, as my Success in the Treatment of it I attribute solely to the Knowledge which I acquired from your ingenious Lectures, and my Attendance at the Westminster Lying-in Hospital, under your Direction.

I am, DEAR SIR,

With the utmost Respect,

Your most obedient Servant,

WILLIAM ROBERT MINGAY.

LABORIOUS CASE.

Mr. S. of B. came to my House, (about five Weeks ago) in great Haste, and desired I would visit his Wife as soon as possible; he informed me that she had been in strong Labour for forty-eight Hours, attended by a Midwife, and for the last twelve Hours by an *experienced Accoucheur*; that his Wife (when he left her) was extremely ill, and that her Friends expected every Moment would put a Period to her Life. — Her Strength was quite exhausted, from having been so long in Labor, without the least Rest; neither had she any Pains for the last ten Hours. Her Pulse was feeble, and she was scarce able to speak. On Examination, I found the soft parts sufficiently dilated, but that the child's head was firmly wedged in the Pelvis; the *occiput projected considerably over the Pubes*, the Head was large and solid, and the Pelvis narrow and distorted. Considering the preceding circumstances, I acquainted her Attendants, that I was fearful of the Event, but that the only Chance she had for her Life was to be delivered as soon as possible. Her Accoucheur proposed the immediate perforation of the child's head, as the *short Forceps had proved unsuccessful*,

successful, and thought there were no other means to save his patient. — I informed him, as we were not certain the Child was dead, I wished to make Use of *Dr. Leake's Forceps*, before I could, with an easy Conscience, consent to open the Head, He readily agreed, although he had never seen their Use before. Having cheered up my patient, by telling her I was in Hopes of saving both her and her Infant, I emptied the Contents of the Rectum and Bladder; then placing her in a proper Position, and having her well supported, I passed a Blade of your Forceps along the left Side of the Child's Head, and the other along the opposite Side; after locking them together, I attempted to make a gentle Extraction, but was defeated; for I perceived, that the Compression of the Blades on each Side of the Head had rendered the difficulty still greater, *by forcing the Occiput farther over the Pubes*, and the Forehead against the Sacrum; I, therefore, had Recourse to your *Lever*, (or third Blade) which I was able to introduce with Ease, between the Occiput and Pubes, by inclining the Handle towards the Perinæum. Having fixed it properly, I made a gentle Compression, and extracted the Head without Violence, at the first Effort, and delivered my Patient in about ten Minutes, of a fine, *living Child*, to the great Satisfaction of those present. My Patient recovered, and is now in perfect Health.

T H E E N D.

